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ARCHAEOLOGICAL SURVEY ALONG THE OBION RIVER:

CULTURAL RESOURCES SURVEY AND TESTING BELOW SHARON AND SIDONIA, OBION, WEAKLEY, AND GIBSON COUNTIES, WESTERN TENNESSEE

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With Contributions By:
John Foss, Patrick H. Garrow,
and Keith McRae

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ARCHAEOLOGICAL SURVEY ALONG THE OBION RIVER:

CULTURAL RESOURCES SURVEY AND TESTING BELOW SHARON AND SIDONIA, OBION, WEAKLEY, AND GIBSON COUNTIES, WESTERN TENNESSEE

DRAFT REPORT

Prepared Under Contract No.
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Prepared by:

GARROW & ASSOCIATES, INC.
ATLANTA, GEORGIA

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Principal Investigator

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12 March 1987

ABSTRACT

During January 1987, archaeologists from Garrow & Associates, Inc. conducted an intensive archaeological survey along both sides of a 14.8 segment of the Obion River system, western Tennessee, in the vicinity of the confluence of the Middle and South Forks. Three sites and two isolated finds were found within the project direct impact zone, in the construction right-of-way, while another 16 sites and four isolated finds were located outside of this area, at distances of up to two kilometers from the river channel. The sites located outside the right-of-way included nine previously recorded sites, whose location had to be verified, as well as seven newly discovered sites and four isolated finds. Documentation of these properties was conducted with the encouragement and permission of the Contracting Officer's Representative. At the three sites found in the right-of-way, contour mapping, controlled surface collection, geomorphological analyses, and test unit excavations were undertaken, providing information on their content, extent, and environmental setting. The three sites were found to be shallow, low density and/or disturbed scatters. None were recommended for further investigation. The information from the twenty five archaeological sites and isolated finds found during the project investigations help document the nature of past human use of the Obion River region of northwestern Tennessee.

ACKNOWLEDGEMENTS

The Obion River Survey Project was funded by the Memphis District of the U.S. Army Corps of Engineers, who are to be thanked for their help during all phases of the investigations. In particular, we would like to thank Mr. Clinton E. Hopkins, the project Contracting Officer, and Mr. W. Douglas Prescott, the Contracting Officer's Authorized Representative, for their advice and assistance. Mr. Prescott, a staff archaeologist with the Memphis District, provided technical assistance throughout the fieldwork and report production activity.

The staff of the Tennessee Department of Conservation's Division of Archaeology is to be particularly thanked for their help throughout the course of this project. In particular, Mr. Nick Fielder, Tennessee State Archaeologist, and Ms. Patti Coates, Tennessee Site Files Curator, provided the Principal Investigator with site file data, reports of previous archaeological investigations, and advice on what was likely to occur in the project area. Dr. Robert Mainfort of the Tennessee Department of Conservation's Pinson Mounds Archaeological Area facility visited the project area, examined project artifacts, and loaned reports from his library. Dr. Mark Barnes of the Atlanta Archaeological Services Branch of the National Park Service also made available copies of reports from his library.

Dr. Dan F. Morse and Phyllis A. Morse of the Arkansas Archeological Survey's Jonesboro, Arkansas Survey Station looked at project artifacts and helped with their identification. Ms. Jenalee Muse helped with proofing the manuscript, and with the preparation of the Data Appendices. Mr. David Jacobs of Sidonia, Tennessee, helped the project in many ways, first by making his boat available, then by volunteering with us for a week in the field, and finally, for the hospitality he and his wife Shirley showed.

The Garrow & Associates, Inc. staff for the project included David G. Anderson, who served as Principal Investigator. He directed the fieldwork, analysis, and did the bulk of the report writing. The field crew consisted of Michael Griffin, Joel Jones, and Kathy Mulchrone. Dr. John E. Foss, of the Department of Plant and Social Sciences, University of Tennessee, Knoxville, served as the project geomorphologist. He visited the project area for three days, collecting soil samples from the three sites in the right-of-way, and wrote portions of the environmental setting chapter. Mr. Patrick H. Garrow performed the historic artifact analysis, while Keith McRae and David G. Anderson examined the prehistoric artifacts. Mr. Brian Morris served as the Project Manager, while the report graphics were prepared by Julie Barnes and Vince Macek. Richard Bryant developed the project photographs, and took

the artifact shots. Dennis Finch prepared a computerized state site form used to handle the site descriptions. Finally, this report has benefited from the review and commentary of Thomas Wheaton.

David G. Anderson
Principal Investigator
12 March 1987

TABLE OF CONTENTS

LIST OF FIGURES

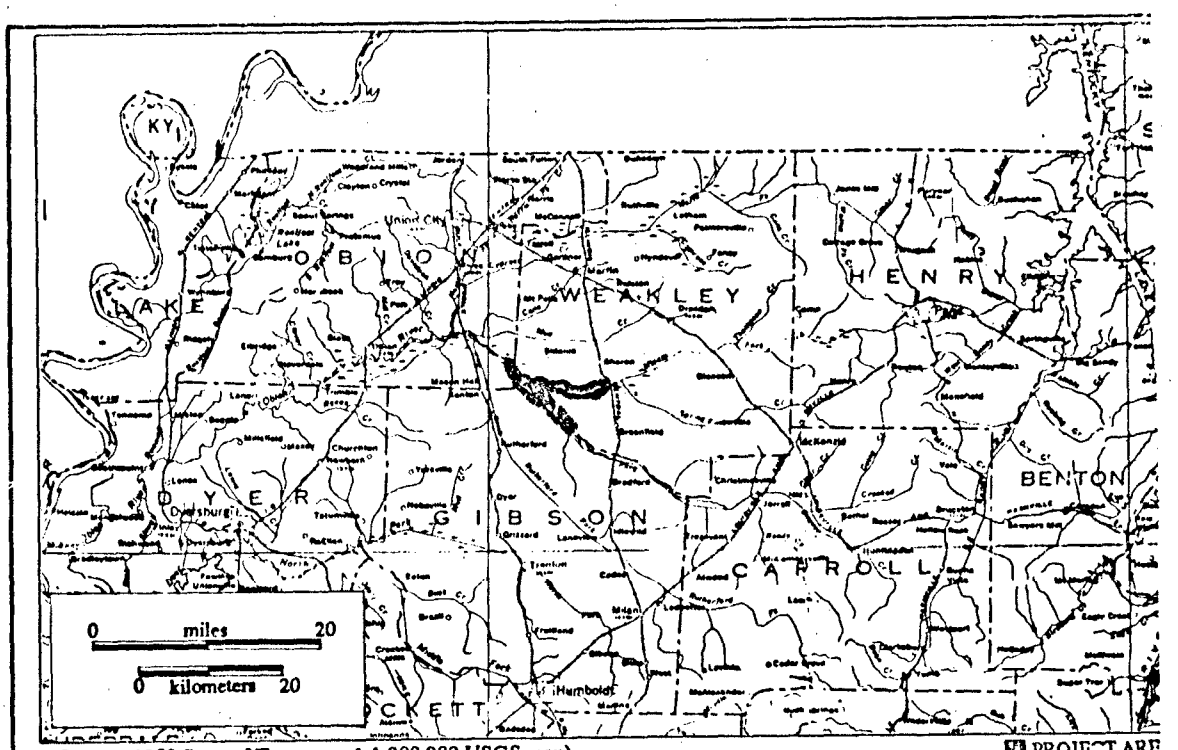
I. INTRODUCTION

From January 5th through 24th, 1987, archaeologists from Garrow & Associates, Inc. conducted an intensive archaeological survey along branches of the Obion River in northwestern Tennessee. The work was conducted for the Memphis District of the U. S. Army Corps of Engineers, in response to their Solicitation No. DACW66-86-R-0077 for *A Cultural Resources Survey and Testing Program of Item 1, Below Sharon and Sidonia, in Obion, Weakley, and Gibson Counties, Western Tennessee*, which was issued August 4, 1986. The project area encompassed approximately 14.8 miles of channel widening in the vicinity of the confluence of the Middle and South Forks of the Obion River (Figure 1).

The exact location of thesurvey area is given in Chapter II, in conjunction with a description of local environmental conditions. Chapter III reviews previous archaeological investigations in the general region, and summarizes current research concerns. As such, it stands as the project research design. Chapter IV focuses on the results of previous archaeological investigations in the immediate study area. Methods by which the project's objectives were achieved are detailed in Chapter V. Chapters VI and VII describe in detail the cultural properties (sites and isolated finds) found within and outside of the project direct impact zone, respectively. Conclusions and Reccommendations are provided in Chapter VIII. Descriptive inventories of project artifacts, correspondence, surveying conditions, as well as a brief description of the project personnel, are to be found in the Appendices.

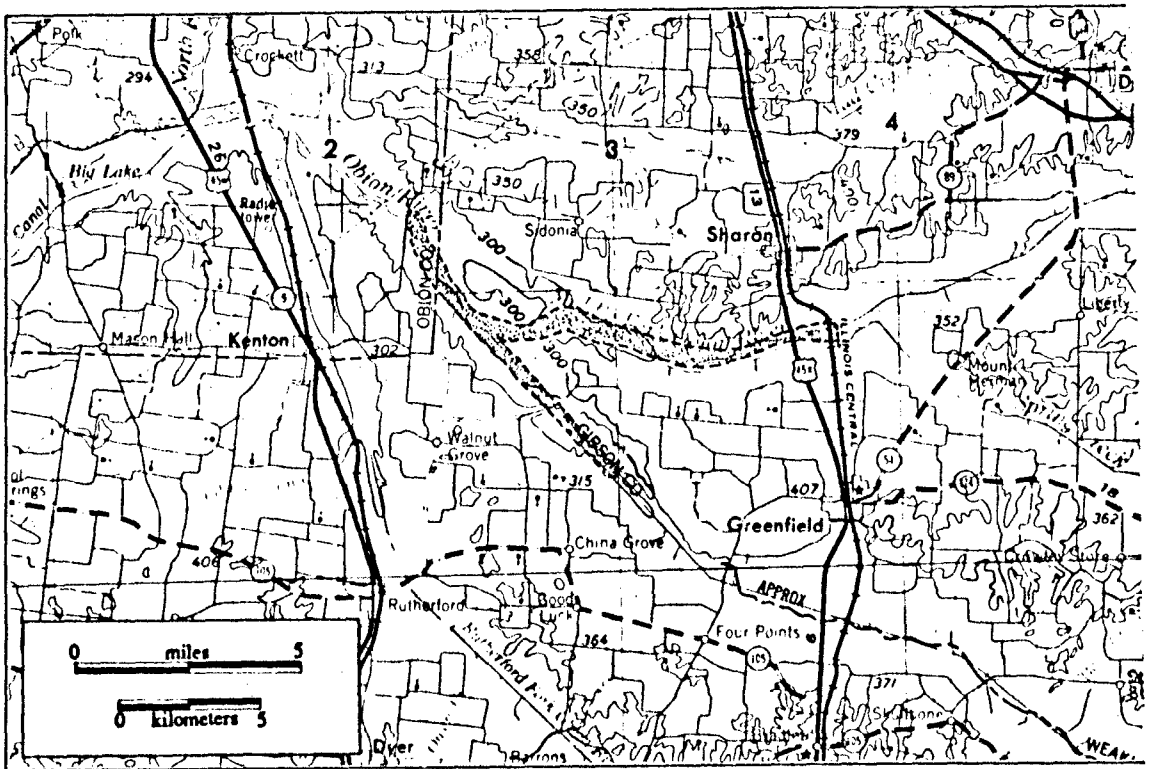
Although a comparatively small scale survey, a fairly extensive amount of information on site occurrence and content in this part of northwest Tennessee was collected. Twenty five cultural properties were examined, including nineteen sites and six isolated finds. All but two of these had prehistoric components; one site and one isolated find were characterized solely by historic remains. Eleven sites and one isolated find had both prehistoric and historic components present. Of the twenty five cultural properties, three sites and two isolated finds were found within the project direct impact zone. Another 16 sites and four isolated finds were located just outside of the project right-of-way, at distances of up to 2 kilometers from the river channel. These included nine previously recorded sites near the right-of-way, whose location had to be checked, as well as several newly discovered sites. The description and documentation of sites outside the immediate project impact area was conducted with the permission and encouragement of the Contracting Officer's Representative, Mr. Douglas Prescott of the Memphis Corps of Engineers.

At the three sites in the project right-of-way, mapping, controlled collection procedures, geomorphological analyses, and test unit excavations were undertaken, providing comprehensive coverage of their extent, content, and



(Source: 1958 State of Tennessee 1:1,000,000 USGS map)

PROJECT ARE



(Source: 1970 Dyersburg, Tenn./Ky./Mo./Ill. 1:250,000 USGS map)

PROJECT AREA

Figure 1.
Project Location.

environmental setting. Upon examination, none of the sites in the direct impact zone was found to warrant further investigation. Their examination, and the data collected from the other sites near the project area, however, provide a useful picture of the past use of the Obion River channel margins.

All artifacts, photographs and notes, and copies of maps and analysis sheets produced as a result of the Obion River Survey Project have been curated at the Tennessee Department of Conservation's Pinson Mounds Archaeological Area, Pinson, Tennessee. The artifacts have been accessioned and cataloged to Division of Archaeology standards, and have been stored in clearly labeled, deterioration resistant containers. Copies of completed site forms for all the cultural properties encountered during the project (sites and isolated finds) are on file in the Tennessee Department of Conservation, Division of Archaeology state site files in Nashville.

II. PROJECT SETTING

PROJECT LOCATION

The Obion River cultural resources survey project area is located in Obion, Weakley and Gibson counties, in extreme northwestern Tennessee. The study area encompassed just under 1,000 acres of land, in two major segments, described as the Sharon and Sidonia tracts (Figure 2). The Sharon tract extends for 7.6 miles along both sides of the channelized Middle Fork of the Obion River, with the survey corridor 300 feet wide on the north side of the channel, and 100 feet wide on the south side. The total area examined was approximately 380 acres. The Sidonia tract extends for ca. 7.2 miles along the channelized main course and South Fork of the Obion River. Along the Sidonia tract, the corridor width varied considerably, ranging from 300 to 700 feet away from the channel. The total survey area along this segment was approximately 605 acres, including 45 acres along the course of three small laterals. Specific corridors examined along each tract are illustrated in Appendix IV, together with a description of survey conditions.

MODERN ENVIRONMENTAL CONDITIONS

Descriptions of the general environmental setting of this portion of Tennessee have been presented in previous archaeological studies undertaken in this region, mostly overviews of National Wildlife Refuges, or cultural resource project reports (e.g., Peterson 1979a, 1979b; Smith 1979a, 1979b; Dickson and Campbell 1979; Mainfort 1985; Jolly 1985). This record of previous research, although limited, provides an initial baseline for the study of historic and prehistoric human settlement in the region. In general, studies undertaken using both aboriginal and early historic settlement data from the general region have shown that sites are consistently associated with certain landforms and/or reconstructed vegetational communities. In particular, sites of all periods are most common on natural levee settings bordering formerly active stream channels; occupation appears to have favored these areas because they were only infrequently flooded. Control of both former drainage and vegetational patterns is thus critical to understanding and evaluating the location and significance of cultural resources found in the project area.

The project area is located in the Western Tennessee portion of the Gulf Coastal Plain physiographic province (Fenneman 1938; Miller 1974). Characterized by level, poorly drained terrain in the lowlands to gently rolling terrain in the uplands, the surface structure of the region is shaped by eroded Pleistocene loess (eolian silt) deposits (Saucier 1974). These deposits, approximately 80 feet in thickness near the Mississippi, taper eastward until

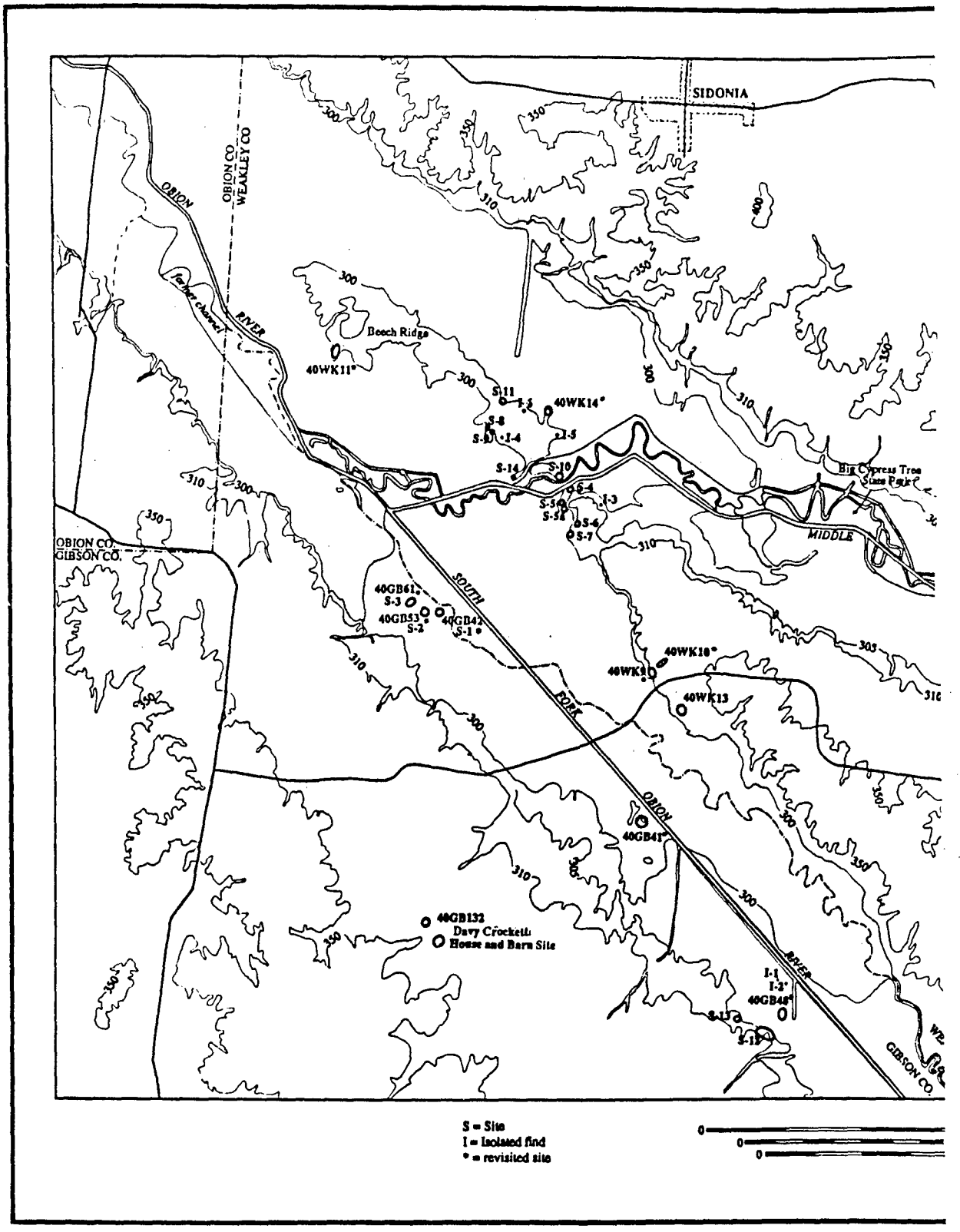


Figure 2.
Obion River Project Area, West Tennessee
(Item 1, below Sharon and Sidonia)

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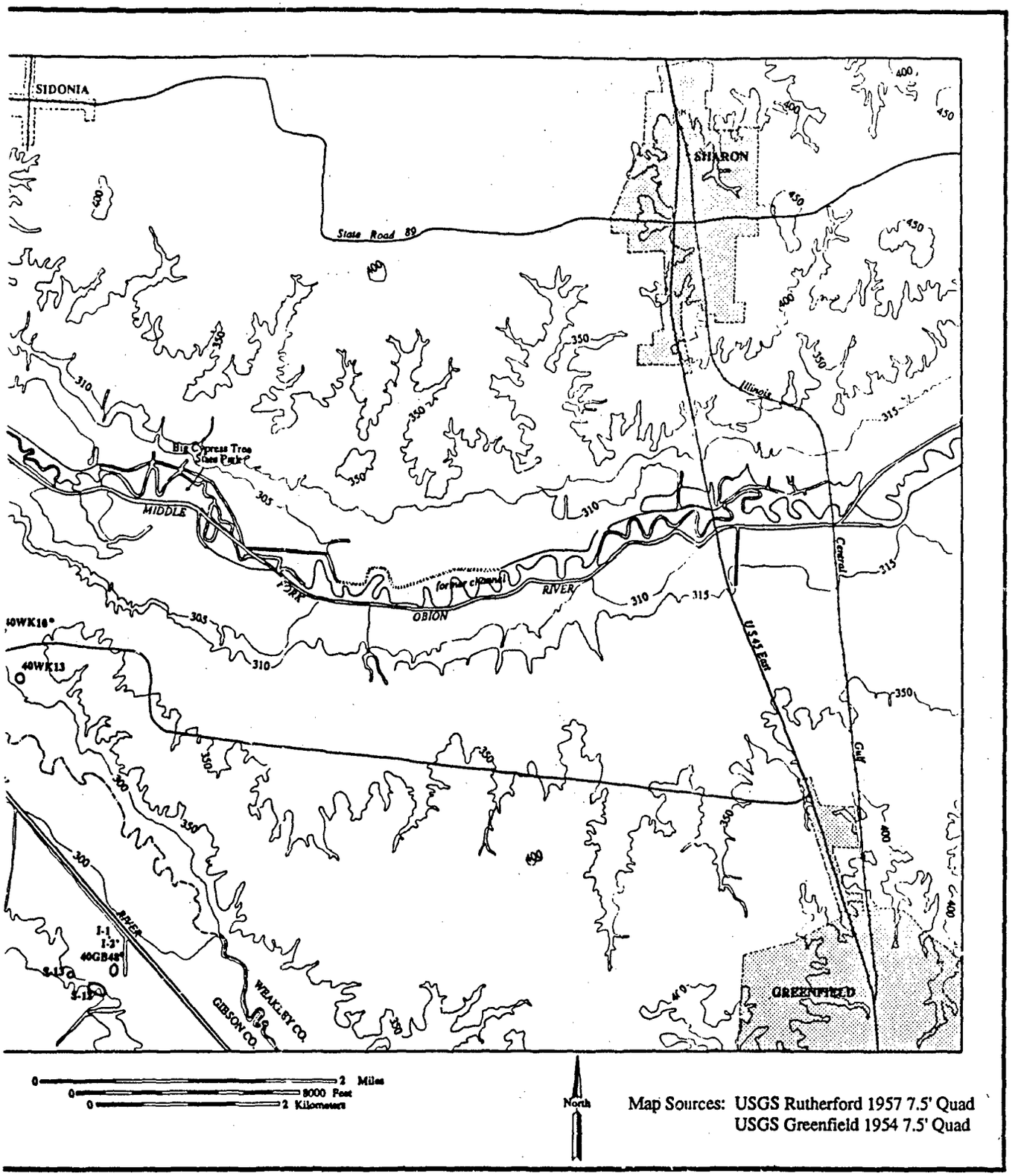


(2)

Obion River Survey Project

they finger out in the West Tennessee Upland portion of the Coastal Plain (Figure 3). In the study area these sediments are approximately 10 to 15 feet thick (Springer and Elder 1980). Most present terrain features were shaped during the Wisconsinan glaciation, from ca. 70,000 to 10,000 B.P., although Saucier (n.d) has identified earlier (Sangamonian) terrace remnants.

The modern climate in the study area is characterized by mild winters, hot summers, and abundant rainfall; detailed climatic information is available from a National Weather Service recording station at Union City, in eastern Obion County (Vaiksnoras 1973:2-4). Average annual temperature is 59 degrees Fahrenheit, with average daily temperature ranging from slightly below freezing in winter to the upper sixties in the summer. Temperature extremes from 109 degrees to minus 23 degrees have been noted since records have been maintained. The freeze-free period, or growing season, averages 210 days, from late March to late October. The area has an average annual rainfall of approximately 49 inches. Precipitation is fairly evenly spread over the course of the year, although the heaviest precipitation typically occurs in late winter and early spring. In late spring and early summer most rain falls in comparatively brief thunderstorms or showers.

Lithic materials of value to prehistoric populations are comparatively scarce in the immediate study area. Tan to buff colored cherts occur in gravel bar deposits along the Mississippi, and in stream beds at the eastern edge of the loess beds, where the underlying Tertiary deposits are exposed (Jolly 1985:6). Tan cherts were infrequently observed at the base of drainage channels in the eastern portion of the project area, although no evidence for prehistoric use of these deposits was noted. Camden and Fort Payne cherts are also observed on local sites, although these do not occur locally, and reflect trade or direct procurement from the western Tennessee River Valley area. Ferruginous sandstone, another material observed on many project area sites, occurs locally in fragipan deposits at depths of several meters below the surface. Locally occurring cherts and ferruginous sandstones appear to have been fairly rare, and would likely have been available only in heavily dissected areas.

DEPOSITIONAL CONDITIONS IN THE STUDY AREA

The soils in the study area are developed in deep loess on the uplands and on alluvial sediments derived from transported loessial sediments in the river valleys. Some lacustrine materials may also be present in the immediate study area, although no sediments identified as lacustrine were observed during the present investigations. The loess deposits in the region are associated mainly with the Wisconsinan period of the Pleistocene, but earlier loess deposits have also been described in west Tennessee (Buntley et al. 1977). The survey corridor followed the predominantly linear, channelized course of the river, which was excavated between 1910 and 1930 (Dickinson 1973:8). Using a

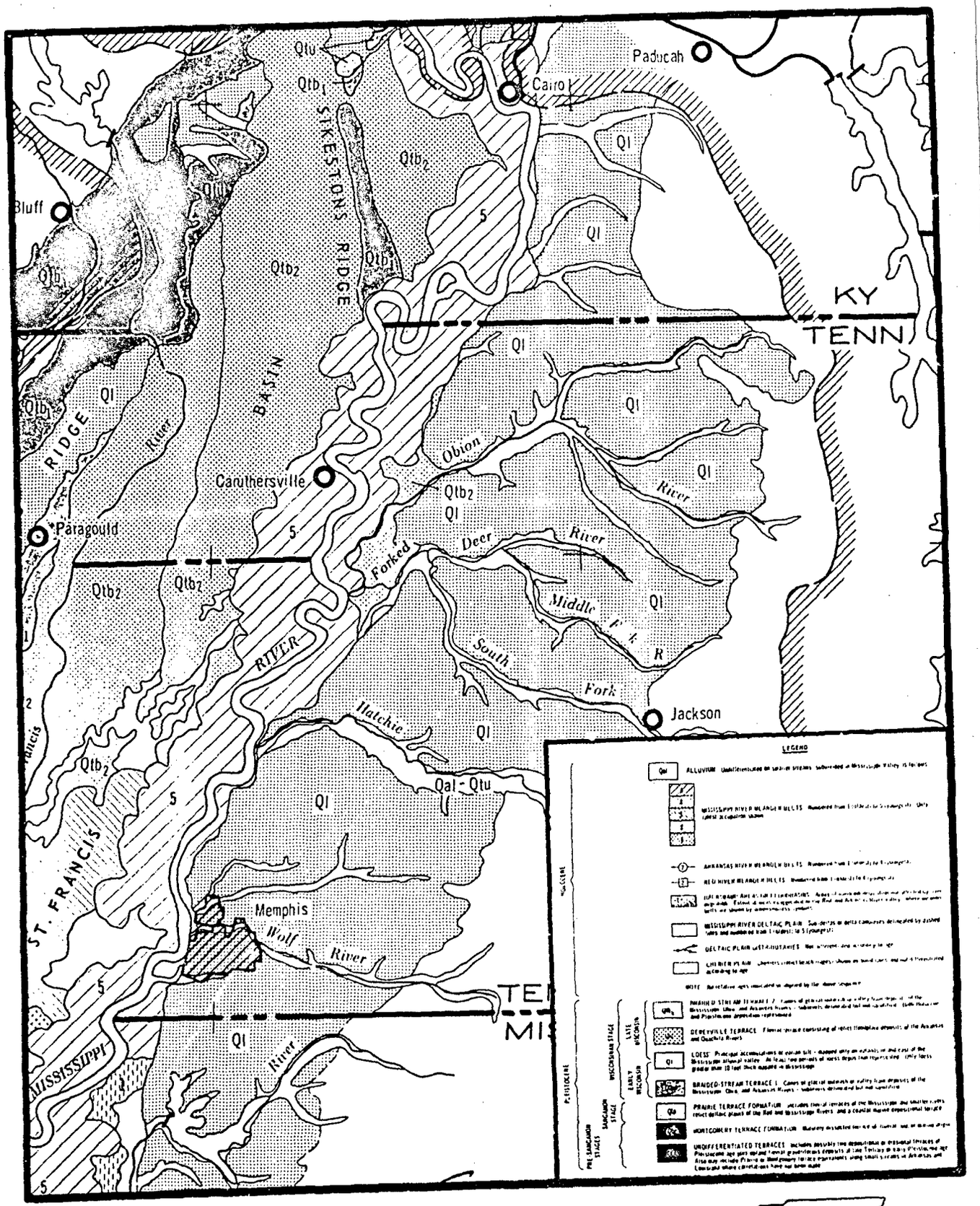


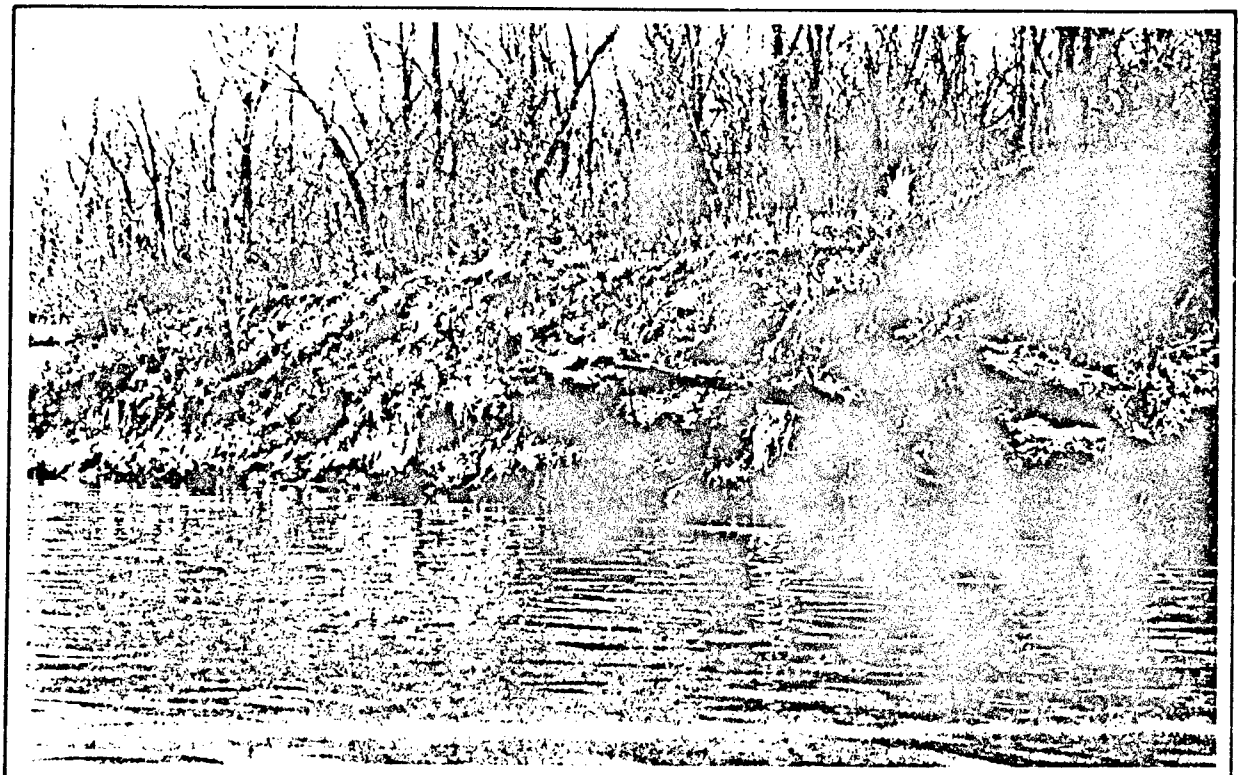
Figure 3.
Quaternary Geomorphology in the Study Area.
(Source: Saucier 1974)

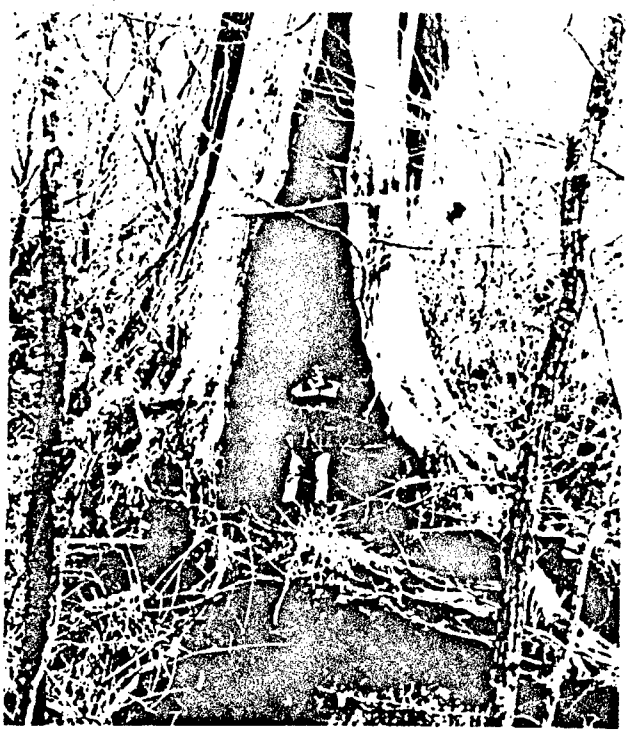
boat, it was possible to examine soil profiles from 3 to 5 meters or more in depth in almost every area of the project. The present channel thus represents a linear transect through the bottomland, repeatedly cross cutting the former meandering natural courses of these streams. As such, old stream channel, levee/terrace, and backswamp profiles were all exposed in the existing channel walls. Detailed decriptions of soil columns from the three sites intensively examined in the project direct impact zone are provided in Chapter VI. A generalized description of the soil characteristics of the project area follows.

Observations along the river banks of the project area, made during the boat reconnaissance, indicated a great deal of disturbance in the upper soil horizons near the channel. Immediately along the channel, and up to fifty or so meters from it, soils dredged out during the channelization are found (Figure 4). Most of these deposits remain where they were piled, in the artificial levees paralleling the channel. In a number of areas disturbed soils were found feathering out from the levees, in project shovel tests, at distances of up to fifty meters from the bank. Inspection of freshly channelized areas elsewhere in western Tennessee indicates that these distrurbed soil layers are the result of intentional leveling activity, and are produced by dragging earth back from the levee margin.

Logs, some showing historic period saw marks, and other recent organic material such as leaves and branches, were observed buried by three to five meters of sediment in bank deposits in some places (Figure 4). Much of the disturbance along the surveyed channel itself reflects overburden piled on the former ground surface during the original dredging. A moderate amount of channel migration within the excavated course of the river has also occurred within the past fifty years, felling trees along eroding bank faces, and reburying them downstream in point bars. The problem is intense enough that periodic snagging, or log removal, is contracted along these channels; the last such snagging in the study area occurred approximately twenty years ago.

In many otherwise undisturbed areas, up to a meter of recent sediment, brought in by overbank flooding, overlies the original, pre-channelization or pre-historic settlement ground surface. The major soils originally occurring along the river, and now buried, are characterized by a "marsh type" morphology, with minimal pedogenic (soil) development. Most of the buried soils below the dredge spoil material showed a single surface horizon, with a small amount of organic matter remaining. Major diagnostic horizons occurring in the soils of the study area are ochric epipedons, argillics, and fragipans. No buried soil zones (Ab horizons), other than the original surface before channelization, were observed in the areas examined in detail during the reconnaissance. Landowners in the immediate area indicated that, prior to channelization, virtually the entire study area was in seasonally flooded swamp. One such owner, in fact, described fishing activity in what are now drained and cultivated fields along the western portion of the Sidonia corridor, and noted that net and trot line fragments were still sometimes found during plowing.





ABOVE. Logs and other debris in the profile of the channelized course of the Obion river, on the west bank just above the confluence of the Middle and South Forks. The large log in the center of the photo was sawn.

LEFT. The burned-out shell of the "Big Cypress" in Big Cypress Tree State Park, on the north side of the Middle Fork of the Obion River. Coring undertaken in the 1940's indicated that this tree was approximately 1350 years old. Measuring 68.8 feet in circumference, it was killed by lightning in 1976.

Figure 4.
Depositional Conditions, Big Cypress Tree.

Along much of the channel intense mottling of the subsoils was evident, the result of water table fluctuations. Swampy conditions appear to have considerable antiquity in the projevct area, possibly over much of the Holocene. Just above the current water level in the channel, the mottling was reddish brown and in some cases a slight cementation was noted. Subsoils were generally gray in color and indicated saturated conditions for long periods during the year. In areas where the overburden colors were dark yellowish brown of dark brown (10YR4/4, 7.5YR4/4), upland sediments were probably used for fill materials.

GENERALIZED SOIL PROFILES IN THE STUDY AREA

The soils in the immediate project area are mapped as Swamp and Waverly series (Brown et al. 1973). Swamp soils occur in:

> low wooded areas that are under 1 foot to 3 feet of water from late in fall through winter and spring and into the summer. During the wettest years, water remains nearly all year in some areas, especially those near Reelfoot Lake. In amny, the water table remains at or near the surface the entire summer. In others, it drops as much as 3 feet below the surface. The soil material is various shades of gray. Along the Obion River, the texture is silt loam or silty clay loam. ...The soil is generally neutral. In most areas slopes are less than 1 percent.
>
> Swamp is conspicuous because the only vegetation is water-tolerant trees, such as baldcypress and water tupelo. Logging is difficult, and tree growth is slow.
>
> Swamp is a choice spot for duck hunting because it provides water and cover during the hunting season. It produces little, is any, food for waterfowl. Because water is near the surface, Swamp is cool in summer and is an excellent spot for deer to bed down (Brown et al. 1973:28-29).

Swamp soils tend to occur back away from former channel courses, in backswamp areas.

Backswamp soils, as well as soils closer to the former terrace and levee margins, immediately along the former stream courses, are also classified as Waverly silt loam, frequently flooded:

> This poorly drained soil occupies some of the lowest areas on the Obion River bottoms. It consists of sediments that are washed from the uplands of northwest Tennessee and part of western Kentucky. Slopes are 0 to 2 percent. The soil is gray, friable silt loam to a depth of

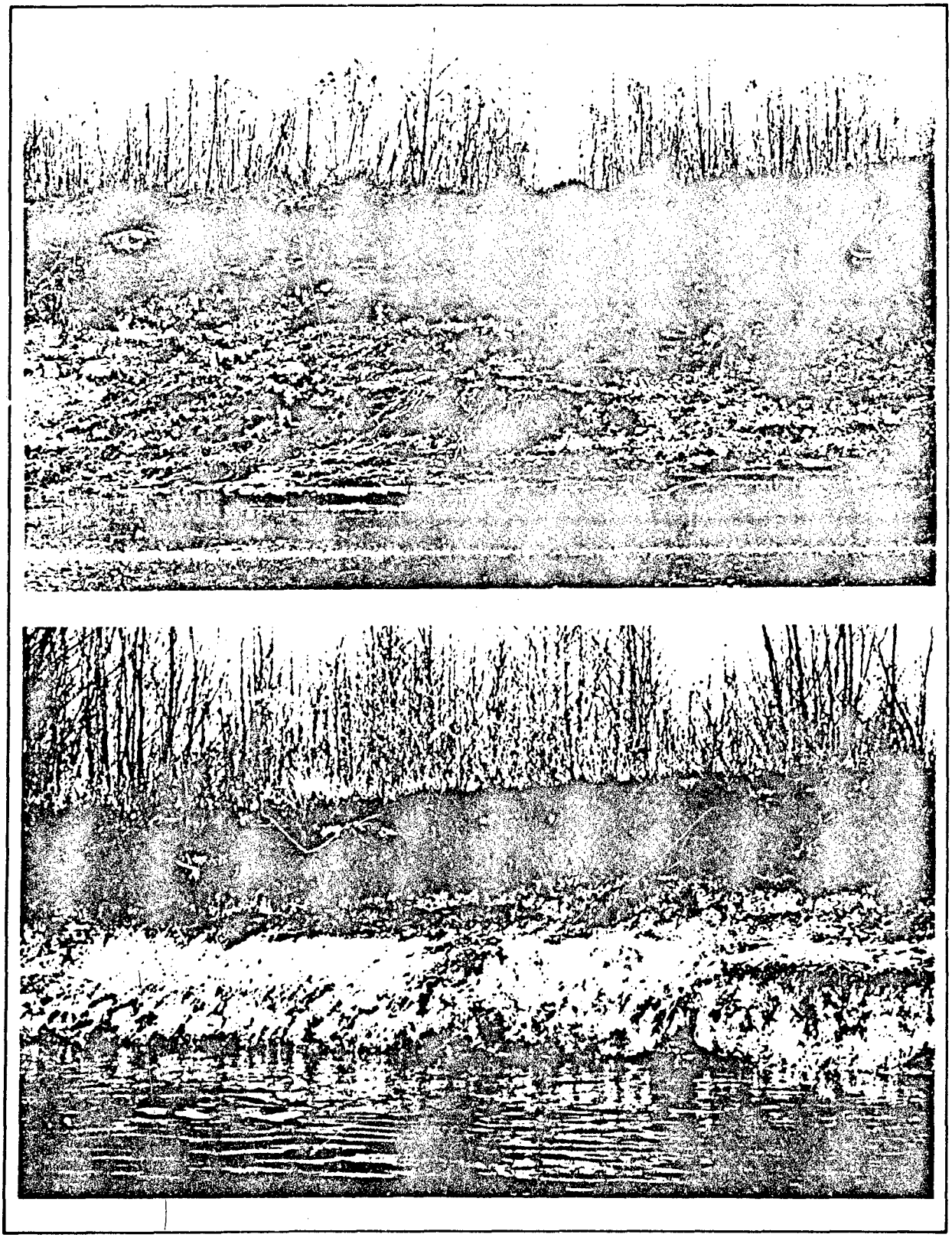


Figure 5.
Bank Profiles.

6 feet or more. Included in mapping are a few strips of better drained soils along old sloughs and ditches and spots of soils that are loam or fine sandy loam.

This Waverly soil is flooded during most of the winter and spring. Floodwater stands in some places during any heavy rainfall. The water table is at or near the surface throughout the winter and spring. It probably remains within a depth of 4 feet during most of the summer and fall.

Exces water makes this soil practically imposible to work... The content of phosphorus and potassium is low. This soil is strongly acid.

...This soil is excellent for growing food and cover for wildlife (Brown et al. 1973:30-31).

Prior to early twentieth century channelization,the study area was thus characterized by meandering stream morphology, with numerous backswamp areas and oxbow lakes. The old, meandering channel may be followed on U. S. G. S. Quadrangle maps of the area, and on aerial photographs (see Figure 2 and Appendix IV).

BIOTIC COMMUNITIES

The project area is located in the Mississippi embayment section of the Western Mesophytic Forest Region (Braun 1950:157) and the Carolinian Biotic Province (Dice 1943:16; see also Mainfort 1985:4-5). Modern biotic communities are the result of extensive historic modification. Most upland areas have been cleared and cultivated, while low lying areas have been logged and drained. As a result of the extensive channelization that has occurred from the early twentieth century to the present day, water tables and drainage patterns have been altered considerably. Many former wetlands in the immediate study area, for example, are now drained and under cultivation. From pollen cores, early historic era accounts, and General Land Office survey records, it is possible to determine the character of pre-settlement vegetation. Although no detailed reconstructions have been attempted in the immediate project area, Shelford (1963:89-114) has documented early historic vegetational communities around Reelfoot Lake, immediately to the west.

In brief, higher, interriverine areas were dominated by an Oak-Hickory and Tulip Oak Forests, with some pines, while the terraces and bottoms were occupied by a number of drainage sensitive communities, including bald cypress in lower areas, and cottonwood-willow and sugarberry-elm sweetgum forests in slightly higher areas (Shelford 1963:91-114). These communities were fully established over the general region by approximately 5000 B.P., towards the end of the Hypsithermal, or

middle-Holocene interval (Delcourt and Delcourt 1981, 1985:20). Prior to tnis, a more generalized oak-hickory mixed hardwood forest was present, which emerged in the late Pleistocene, following the glacial maximum (Delcourt and Delcourt 1981:145, 1985. These communities would have produced extensive nut mast, a food resource of considerable value to both human and game animal populations. The range of wild plant resources exploited by aboriginal populations in the general region has been detailed by Cleland (1966), Yarnell and Black (1985), Smith (1986), and others. Mainfort (1985:4) has noted that several species of seed producing plants of the Eastern Agricultural Complex (e.g., Ford 1985), are common in the floodplain zone in the project area. These species include *Chenopodium album* and *Polygonum sp.,* which were domesticated by prehistoric American Indian populations elsewhere in the midwest, and may have been cultivated locally.

The isolated and now dead cypress in Big Cypress State Park on the north side of the Middle Fork of the Obion River, in the immediate project impact zone, offers mute testimony of the former vegetation in the area (Figure 4). Located 100 feet north of the channel approximately three miles east of the confluence of the Middle and South Forks of the Obion, the tree was examined in detail by the Tennessee Forestry Department in 1946 (Prins 1965:55-56; Vaughan 1983:35-38). At that time it measured 122 feet tall and 55 feet 8 inches in circumference; coring indicated that it was approximately 1350 years old. Originally considerably taller, the tree had been partially truncated by lightning at some point in the past. In 1976 the tree was hit a final time by lightening, shattering all but the first 45 feet of the trunk, and scattering branches over the surrounding area. In 1973, the area around the tree was made a state natural area, and a 330 acre tract on the north and south sides of the river is now under protective custody.

Modern faunal communities in the Carolinian Biotic Province have been variously documented (Dice 1943; Cleland 1966), and a number of studies have focused on species found in or near the immediate Obion River survey area (e.g., Dickenson 1973; U.S. Army Corps of Engineers 1975; Howard et al. 1982). Over 100 species of freshwater fish have been identified in the Obion River system, of which catfish, drum, gar, and other species were of considerable importance to prehistoric populations (Dickinson 1973:46). Modern commercial fishermen, using traps and trot lines, in fact, draw upwards of a hundred pounds of catfish from the immediate study area each week; it was possible to watch these activities during the boat reconnaissance. A diverse mammalian faunal assemblage also occurs in the project area; important game species present included deer, beaver, otter, muskrat, raccoons, and rabbit, all of which were observed during the survey. Migratory birds occur in substantial numbers seasonally.

An early historic account, written by David Crockett in ca. 1830, provides a vivid picture of the richness of the country:

> After returning from the Legislature, I determined to make another move and so... cut out for the Obion. I selected a spot when I got there, where I determined to settle; and the nearest house to it was 7

> miles, the next nearest was 15, and so on to 20 [Note: Crockett's house site, located approximately two kilometers outside the study area, is illustrated on Figure 2]. It was a complete wilderness, and full of Indians who were hunting. Game was plenty of almost every kind, which suited me exactly, as I was always fond of hunting. The nearest house to me (7 miles) was on a different side of the Obion River, belonged to a man named Owens; and I started there. ...there was no boat to cross the river in, and it was so high that it had overflowed all the bottoms and low country near it. ...during the spring I killed 10 bears, and a great abundance of deer. ...[During] my Falls [sic] hunt ...in the last of October, 1829 I found bear very plenty, and all sorts of game and wild varmints, except buffalo, there were none of them. (Crockett 1834, cited in Prins 1965:26-30)

The comparative richness of the study area is still evident, and was reflected in the numerous fish and game animals observed along and near the channels during the course of the present project.

CONCLUSIONS

The field environmental and geomorphological research indicated that most of the project area lay in old backswamp areas unlikely to have been suited to either prehistoric or historic settlement. The backswamp deposits typical of most bank profiles appear to have a considerable antiquity in the project area, and are hence unlikely to have seen extensive settlement at any time in the recent past. This patterning was generally reflected in the occurrence of archaeological sites in the general area; almost all of the cultural remains detected were on old, elevated terrace remnants considerably (10 feet or more) above the surrounding terrain. Exceptions to this pattern were isolated finds, recent historic artifacts, or artifacts in disturbed contexts. While deeply buried cultural deposits may be present in the project area, this is considered unlikely. Given the extensive profiles already carefully examined (over ten miles of exposed bank profiles, up to 8 meters in extent), their detection would be purely fortuitous.

III. CURRENT RESEARCH CONSIDERATIONS

INTRODUCTION

In this chapter, a brief description of the cultural history of the study region is presented in a period-by-period format, together with an extended discussion of research questions of interest to archaeologists working in the general western Tennessee area. As such, it provides a general research framework, within which project cultural resources may be evaluated. It should be noted at the onset that comparatively little is known about the past human occupation of this part of western Tennessee (see Chapter IV). In spite of this, enough is known to demonstrate the research potential of cultural resources the general area. The present fieldwork provided one of the few opportunities in recent years to intensively survey a portion of the Obion River area. As such, the information about site and component distribution and assemblage composition should be of considerable interest to archaeologists working in the area.

PALEOINDIAN PERIOD (ca. 11,500 - 9,800 B.P.)

Fluted Point Occupations

Paleoindian components in the western Tennessee region are identified by the presence of fluted and nonfluted lanceolate projectile points. Early Paleoindian components in the general region are identified by Clovis points, which are relatively large, thick bifaces with nearly parallel haft edges, slightly concave bases, and single or multiple flutes. Other tool forms that are thought to date to the Paleoindian period are hafted endscrapers, blades, burins, and other well-made, formal unifacial tools; these forms continue to be manufactured in the ensuing Early Archaic period, however, and are not strictly diagnostic. There is some agreement that larger fluted Clovis-like points are earlier in the Southeast than the small, often unfluted and more waisted forms, although absolute stratigraphic evidence is lacking locally. Presumably later fluted Paleoindian forms, such as Cumberland, Redstone, and Quad occur in the western half of Tennessee, although what their occurrence and distribution signifies is currently obscure (Meltzer 1984).

Comparatively few fluted lanceolate projectile points have been found in western Tennessee. Known finds in this general region are from surface context, and tend to occur along the major river systems (i.e., former Ohio/Mississippi River channels), or to the east of the loess sheets, along the Tennessee River. Although archaeological remains are scarce, Paleoindian settlement is thought to have been fairly extensive in this portion of the

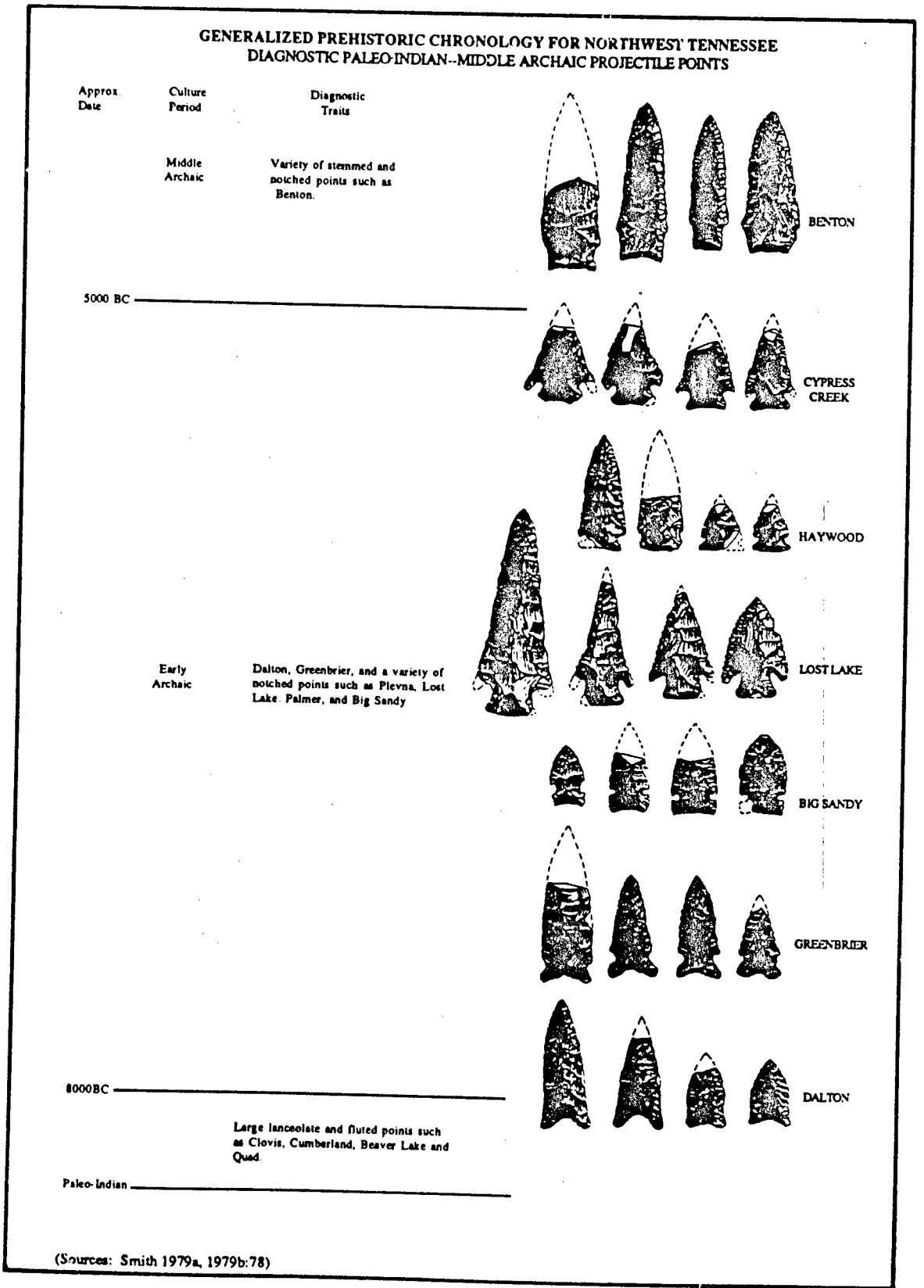


Figure 6.
Diagnostic Paleo Indian - Middle Archaic Projectile Points.

Mississippi Alluvial Valley (Morse and Morse 1983). Given the extensive late Pleistocene loess deposits in the project area, and subsequent channel migration and alluviation, intact land forms dating to the period of PaleoIndian settlement are likely to be rare, and some may be deeply buried under more recent deposits. In the study area, accordingly, the lower sections of profiles, particularly contacts between the loess and underlying sediments, were carefully examined. Although chert gravels were noted in a few cases where this contact occurred, no worked material was observed. Care was also taken on older land surfaces, such as Beech Ridge, which bisected the Middle Fork of the Obion River, for possible evidence of early occupation. No evidence for PaleoIndian occupation of the project area was detected.

Dalton Period Settlement

Later PaleoIndian occupations in the western Tennessee area are identified primarily by the presence of Dalton points, which have been dated from ca. 10,500 to 9,800 years B. P. across the region (Goodyear 1982). The Dalton point and associated toolkit retains many characteristics of earlier assemblages, although the extensive evidence for resharpening suggest technological differences in the use of these bifaces (Goodyear 1974). Dalton populations represent the earliest adaptation in the region to post-glacial climatic conditions, when modern faunal assemblages replaced late Pleistocene faunal assemblages. Smith (1979b:19) notes that Dalton components have been found in western Tennessee, although none were encountered in the present survey. If Dalton sites can be found in the western Tennessee area, however, they will offer the opportunity to further refine our understanding of late PaleoIndian settlement in the region. Sites with undisturbed deposits will be significant because they will offer the opportunity not only to inform on Dalton lifeways locally, but also to potentially help resolve the ongoing debate among several archaeologists over the nature of Dalton settlement in the central Mississippi region (Morse 1975a, 1977; Schiffer 1975; Price and Krakker 1975).

In brief, Morse (1975a, 1977) posits that during Dalton times--the period when Dalton points were manufactured, from ca. 10,500-9,800 B.P. (Goodyear 1982)--portions of the central Mississippi Alluvial Valley were inhabited by bands living in permanent or semi-permanent base camps, from which they exploited linear territories oriented along major watersheds. Within each territory, the base camps tended to be centrally located in areas roughly 10 km in diameter, allowing for reoccupation of different locations. Outlying logistical stations, most of which are thought to be hunting/butchering camps, were scattered throughout the remainder of the territory. The Brand site in northeast Arkansas, excavated by Morse and Goodyear (Goodyear 1974) has been interpreted as being this kind of site. Other specialized sites included vegetable food-processing and collecting loci, cemeteries, and quarry areas. Fixed territories, each roughly 2,200-3,200 square km in extent have been

proposed, with formal cemeteries such as the Sloan site (Morse 1975b) present in each territory.

Schiffer (1975) and Price and Krakker (1975) have taken considerable exception to Morse's model. They have argued against the existence of linear, drainage oriented territories, suggesting instead that Dalton groups "occupied territories which crosscut major physiographic and resource zones" (Schiffer 1975:111). The presence of year-round settlements was also challenged; greater annual mobility, perhaps between seasonally occupied camps, was suggested as an alternative settlement model. The Brand site, with its extensive formal tool assemblage, was interpreted as a seasonal base camp rather than a temporary hunting station (Schiffer 1975:100-111). Examination of the spatial distribution of Dalton sites over the western Tennessee area, and the excavation of undisturbed Dalton assemblages, should help refine this debate, and our understanding of this period. No Dalton or other PaleoIndian sites were found during the current survey project.

ARCHAIC OCCUPATIONS (Ca. 9,800 - 3,000 B.P)

Early Archaic (Ca. 9,800 - 7,000 B.P.)

The Early Archaic occupation of the western Tennessee area has been dated from roughly 9,800 - 7,000 B.P, and is recognized by a series of side, corner notched and bifurcate-based projectile points (Figure 6), variously typed as Big Sandy, Kirk, Lost Lake, Haywood, Cypress Creek, Graham Cave Notched, Hardin Barbed, St. Charles Notched, LeCroy, and St. Albans, to name some of the dominant type names employed locally (e.g., Smith 1979a, 1979b; Mainfort 1985; Jolly 1985). These types are based on work in the central Mississippi Valley (as summarized in Chapman 1975; Morse and Morse 1983), central and eastern Tennessee (e.g., Lewis and Kneberg 1961; Faulkner and McCollough 1973; Chapman 1976, 1985), and northern Alabama and Mississippi (Cambron and Hulse 1964; Ensor 1979). As across much of the Southeast, the sequence of Early Archaic hafted bifaces in western Tennessee, from earliest to latest, ranges from side notched to corner notched to bifurcate forms, with considerable temporal overlap in forms.

The use of typologies developed elsewhere in the region reflects a general lack of local excavation; major, stratified or single component sites dating to this period remain to be excavated in northwest Tennessee. Information on Early Archaic assemblages in the western Tennessee area, in fact, derives almost exclusively from surface finds. In addition to the diagnostic projectile point types, a number of well-made tool forms are also thought to date to this period, including a diversity of scrapers, large chipped stone choppers, and reworked points, together with a number of possible plant processing tools, including pitted cobbles and manos. One possible Early Archaic component

was observed during the current project, at 40WK10, where a corner notched hafted biface and several well-made hafted scrapers were collected (see Chapter VI).

Resolving the nature of Early Archaic settlement is an important research question to consider in any examination of archaeological resources in the Obion River area. A generalized foraging adaptation by small, highly mobile groups is inferred, although evidence available locally in support of this viewpoint is minimal. Several investigators have recently suggested that our traditional views of this period are inaccurate and in need of revision (Claggett and Cable 1982; Neusius and Wiant 1985; Anderson and Hanson 1985). In particular, a greater use of plant resources is inferred, suggesting that Early Archaic populations may have had a somewhat more diversified subsistence base with less reliance on hunting than previously thought. Finding any sites from this period in the project area, and resolving their contents, would help address these problems. Chapman (1975:157) has noted that the Early Archaic period has been neglected by researchers working in the general region, and has suggested that "old soil surfaces, particularly the old natural levees along small streams" would be the best place to look for sites of this period. This pattern has also been observed locally by Smith (1979b:19), who observed a correlation of early points with active stream terraces. Two Early Archaic sites were found during the present survey, at 40WK10 and at Site 8.

Middle Archaic Period (ca. 7,000 - 5,000 B.P.)

The Middle Archaic period, like the preceeding Early Archaic, is very poorly known in the Obion River region. The end of the Early Archaic in the region is characterized by the replacement of corner notched and bifurcate forms by a variety of square and contracting stemmed points. Diagnostic artifacts dating to this period are poorly documented locally, due to a general absence of excavation, although Eva, Benton, Morrow Mountain, Bartlett, and Denton projectile point forms occur in surface collections (Smith 1979b:19) (Figure 7). Until excavations occur locally, information on Middle Archaic occupations will continue to come from comparison with assemblages from other areas, such as at the Modoc Rock Shelter in Illinois (Fowler 1959), the Eva site in central Tennessee (Lewis and Kneberg 1965), and work in eastern Tennessee and North Carolina (Coe 1964; Chapman 1976, 1985). Full-grooved axes, expanding-based drills, and atlatl weights are thought to date to this period; many such artifacts found in conjunction with the above-mentioned projectile point types are reported from amateur collections.

Perhaps the most common Middle Archaic biface type in the general project area is the Benton, which has been dated from ca. 6,000 to 5,000 B.P. (Mainfort 1985:8); possible Benton points were recovered at sites in the current survey project. Smith (1972:111-112) has reported a somewhat complementary distribution of Bartlett and Benton points in west Tennessee,

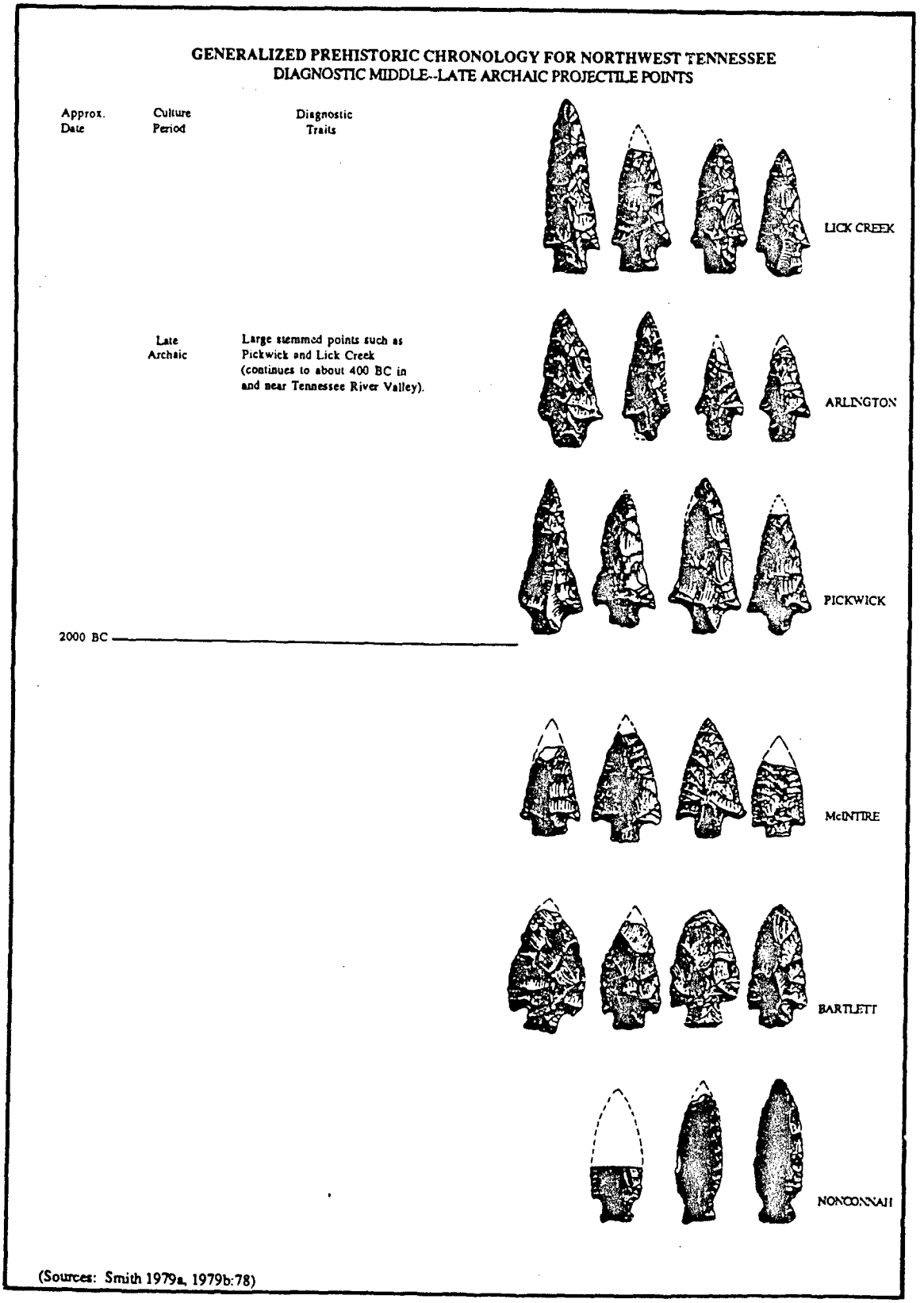


Figure 7.
Diagnostic Middle - Late Archaic Projectile Points.

with the former found predominantly near the Mississippi and the latter in areas to the east. He suggests possible movements by Benton-using populations from the Tennessee River Valley, into the loess zone to the west, perhaps on a seasonal basis, to take advantage of resources found in that zone. Raw material source area analyses, and the examination of large collections of diagnostic projectile points from across the west Tennessee area, would be methods by which Smith's observation could be further explored.

The Middle Archaic period spans the Hypsithermal, or climatic optimum, which was characterized by a pronounced drying trend in the general region. Although western Tennessee continued to be dominated by an oak-hickory forest, a shift from forests to grassland may have occurred in some areas (Semken 1933). At this time large-scale shellfish utilization appears in the Tennessee River Valley. Although Walthall (1980) has suggested that Middle Archaic populations practiced a "narrow spectrum" subsistence strategy, focusing on deer, nuts, and shellfish, it is more probable that a wide range of resources were regularly exploited (Smith 1986). It is during the Middle Archaic, in fact, that the first experiments with plant cultivation occur, both with local seed plants, and Mesoamerican domesticates such as squash and gourd (Ford 1985). Like sites of the preceeding era, Middle Archaic occupations are assumed to occur on older, more stable land surfaces, particularly on higher elevations. Given large site samples, it should be possible to more precisely resolve these ecological associations, helping us understand the nature of settlement pattern changes over the course of the Archaic, and reasons why these changes may have taken place. Probable Middle Archaic components were observed at two sites in the survey area, at 40WK10 and at Site 12.

Late Archaic Occupations (ca. 5,000 - 3,000 B.P.)

Late Archaic period sites in the western Tennessee area are identified by a range of artifact types, including Gary, Lick Creek, Mulberry Creek, Burkett, Big Creek, Mabin, Arlington, and Pickwick projectile points, and less securely by the presence of baked clay balls, and bannerstones (Figure 7) (Smith 1979a; Ensor 1981; Morse and Morse 1983). Ceramics appear in the lower Southeast at the end of the Late Archaic period. Wheeler series fiber tempered pottery, the first ware to appear locally, is only infrequently noted in extreme western Tennessee, although it is fairly common to the east, in the Tennessee River Valley (Mainfort 1985:9). Although a wide range of projectile point categories are used to identify sites of the period, most of the identified types are minor variants of a regional theme of fairly large, square to contracting stemmed forms. Probable Late Archaic projectile points were found at several sites in the study area during the present survey, as well as several baked clay ball fragments.

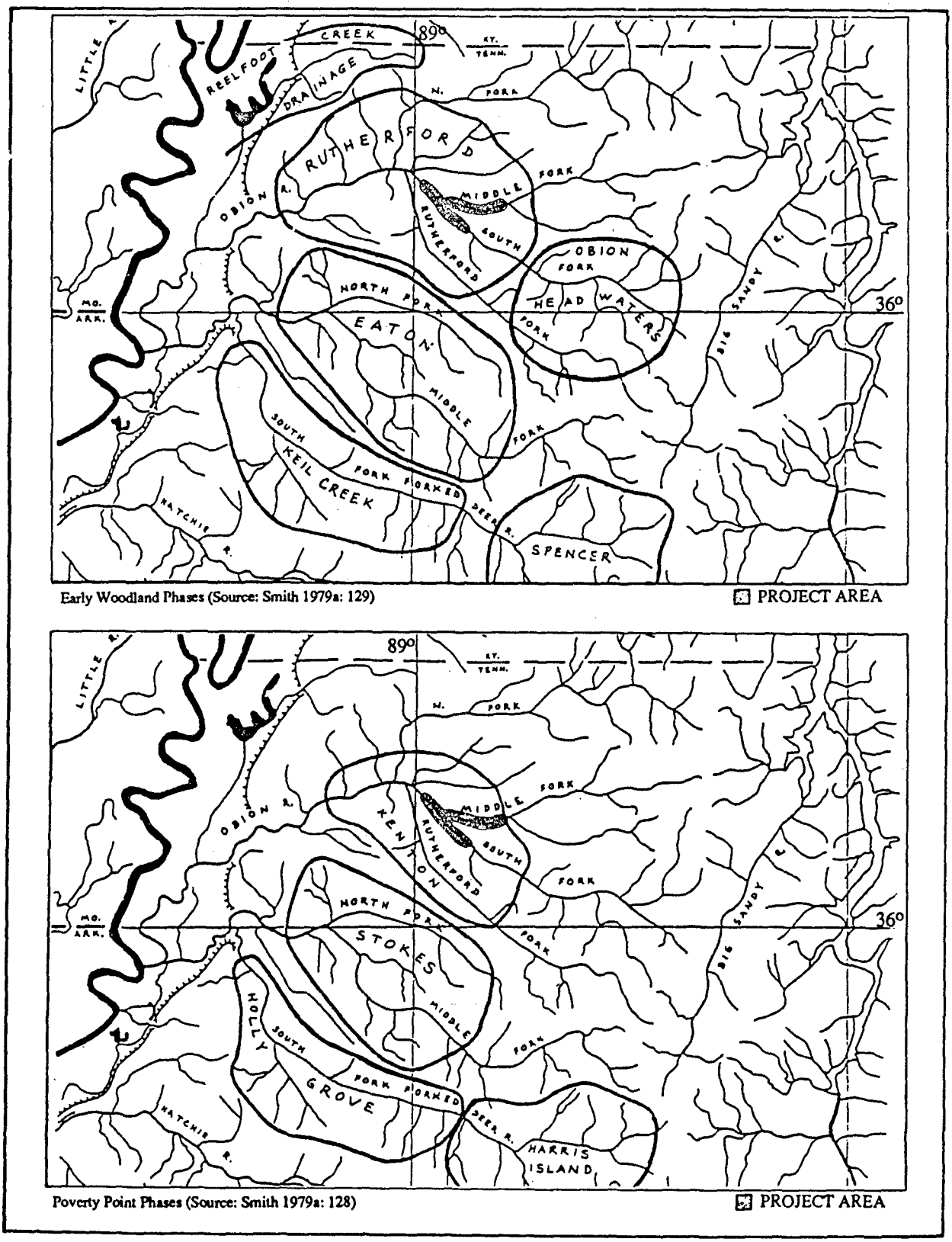
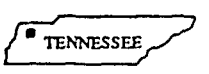


Figure 8.
Poverty Point, Early Woodland Period Phases
Northwest Tennessee.



Toward the end of the Late Archaic period, clear relationships with the Poverty Point complex in the Lower Alluvial Valley are evident in the widespread local occurrence of baked clay balls and the infrequent occurrence of lapidary items such as carved and polished beads. Whether major Poverty Point occupations were present in the Obion River study area is not currently known, although baked clay ball fragments were observed on a number of sites. Smith (1979a:73-75) has argued for the presence of five possible Poverty Point phases in the northwest Tennessee area (Figure 8), based on minor differences in the distributions of diagnostic projectile points and other artifact categories. The Kenton Phase occurs in the immediate study area:

> Clay objects of the Kenton Phase include spherical, biconical, ellipsoidal, and biscuit-shaped plain; spherical and ellipsoidal cord marked; ellipsoidal and biscuit-shaped cane impressed; and biscuit-shaped fingertip impressed. Projectile point types include Lambert, var. A; Dehli, var. B; Harris Island, var. A; and Arlington. Although the present collections with clearly identifiable types are rather small, the spherical and biconical plain and biscuit-shaped cane impressed and fingertip impressed clay object types appear predominant. The area included is the central half of the loess soils zone sector of the Obion River drainage, except most of the North and Middle Forks of the Obion (Smith 1979a:75)

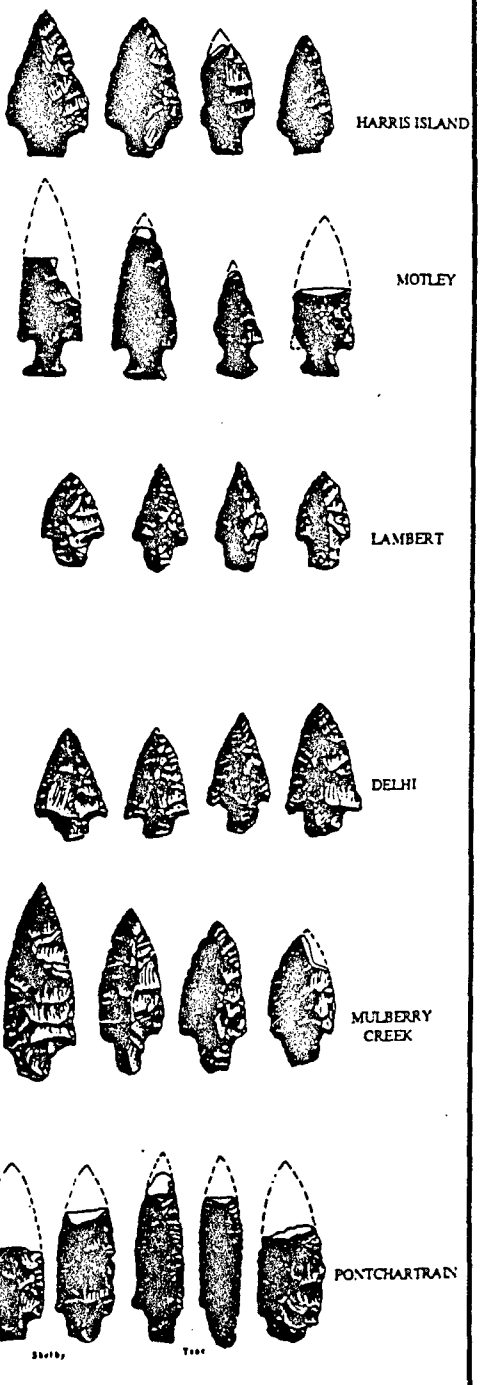
In the absence of extensive, well-documented survey or excavation data from across the region, however, the validity and significance of these Poverty Point phases remains unclear.

Most of the baked clay objects found in the west Tennessee area are comparatively simple, biconical, ellipsoidal, or spherical shapes typical of Poverty Point components elsewhere in the lower Mississippi Alluvial Valley (Smith 1979b:20). Some of these forms appear to have persisted later in time, into the Woodland period (Phillips 1970:870), and they have been found in clear association with fabric marked pottery at Pinson Mounds (Mainfort 1986a). In the present study, baked clay object fragments were almost invariably found with small to medium sized stemmed points, and sand/grog tempered plain or fabric impressed pottery, although the surface context of the assemblages makes arguing for direct associations impossible (Figure 9).

Settlement patterns during this period are largely unknown. Smith (1972:20) has argued that special activity sites of this period may occur in almost any environmental zone, but that base camps (what he calls gathering camps) occur almost exclusively in the transition zone between the uplands and the bottomland swamp/hardwoods, and usually on isolated ridge tips or rises of Grenada or Calloway soils. Specific models of Late Archaic settlement patterning in the northern portion of the Lower Mississippi Alluvial Valley

GENERALIZED PREHISTORIC CHRONOLOGY FOR NORTHWEST TENNESSEE
DIAGNOSTIC POVERTY-POINT--EARLY WOODLAND PROJECTILE POINTS

Approx. Date	Culture Period	Diagnostic Traits
	Early Woodland	Clay, sand, clay-and-sand tempered plain, cordmarked, and fabric impressed bowls and pots; small stemmed points; occasional conical burial mounds.
300 BC		
	Poverty Point	Round, Biconical, and biscuit-shape baked clay objects, often with cane impressed, cordmarked, or fabric impressed surfaces; medium to large stemmed points.
1500 BC		



(Sources: Smith 1979a, 1979b:78)

Figure 9
Diagnostic Poverty Point - Early Woodland Projectile Points.

remain largely speculative at the present. The discovery of undisturbed Late Archaic components in secure context, and the excavation of those components will be essential if questions about site size, composition, and season of occupation are to be considered.

WOODLAND PERIOD OCCUPATIONS (ca. 3,000 - 1,000 B.P)

Early Woodland (ca. 3,000 - 2,400 B.P.)

The Early Woodland period in the Eastern Woodlands is traditionally assumed to have been the time of the initial introduction of pottery into much of the region, the appearance of elaborate burial mound ceremonialism, and the first evidence of intensive horticulture (Griffin 1967:180). The Woodland period lasts for approximately 2000 years, and ends around A.D. 1000 with the emergence of Mississippian societies employing intensive agriculture over much of the region. Criteria for the identification of specific Woodland subperiods in the northwestern Tennessee area are not well developed. Alexander and Tchula series ceramics are considered indicative of initial Woodland components over much of the region, although the former are quite rare in northwest Tennessee (Mainfort 1985:5), and a host of problems attend the identification of Tchula assemblages locally (c.f., Smith 1972:117, 1979a:75-77; Mainfort 1986b:52-56).

The term Tchula has been used to refer to Early Woodland components in the northern portion of the Lower Mississippi Alluvial Valley; these components are assumed to be roughly contemporaneous with those of the Tchefuncte culture in the lower portions of the valley near the river mouth (Phillips et al. 1951:431-436). Smith (1972; 1979) has reported Tchula components from a number of locations in western Tennessee, most commonly close to the Mississippi. Criteria for the recognition of Tchula components included:

> Tchefuncte Plain, with Cormorant Cord Impressed and Twin Lakes Punctated as minority companion types. Crowder Punctated and Withers Fabric Impressed are conspicuous by their rarity. Decorative motifs in Cormorant Cord Impressed consist primarily of bands of diagonal cord impressions set off by Twin Lakes punctation at the rim and lower margin of the band and cross-hatched cord impressions... Small stemmed [Mabin-like] projectile points... appear to be associated with the Tchula ceramics (Smith 1972:117).

Some of these ceramic finishes extend into the subsequent Middle Woodland period. Mainfort (1986b:52) has noted that Smith's Tchefuncte Plain grog-tempered pottery is indistinguishable from Baytown Plain, and has recommended that the Tchefuncte Plain category be abandoned.

Smith subsequently defined an Early Woodland Rutherford phase in the vicinity of the Obion River study area (Figure 8):

> The Rutherford Phase area corresponds with that of the Poverty Point Period Kenton Phase in the south-central portion of the loess soils zone sector of the Obion River drainage. ...Tchefuncte, var. Tchula; Thomas; and Baldwin wares are present in the district. Throughout the ware sequence the aggregate of plainware remains at less than 50%, with fabric impressed surface finish dropping from about 26% of the Tchefuncte ware to a single sherd in the Baldwin ware and cordmarking increasing from about 17% of the Tchefuncte ware to about half of the Thomas and Baldwin wares. Decoration includes 2 examples of Tammany Punctate, 1 of cord impressed diagonals, and 1 of cord impressed rim bands on Tchefuncte paste; and 1 Baldwin paste sherd with short incised or stamped lines, with expanded ends, which are parallel and carefully aligned both vertically and horizontally. Woodland projectile point types represented include Mabin... Claiborne... and Adena (Smith 1979a:80-81).

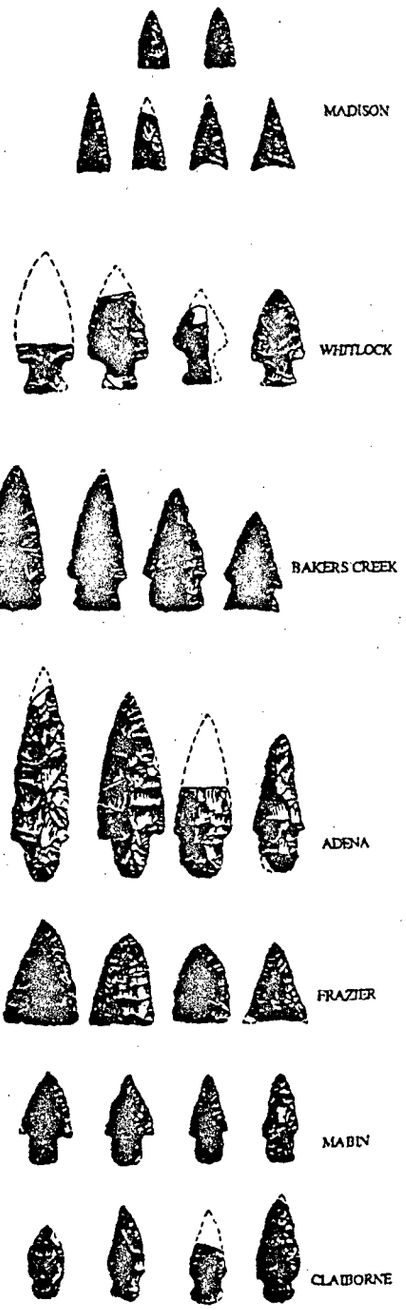
Mabin and Claiborne points appear to be quite common, as well as projectile points of the Flint Creek Cluster (Ensor 1981)(Figure 10). Camps and small villages are thought to characterize sites of the period (Smith 1979b:21). In the absence of extensive, well-documented survey or excavation data, the validity and significance of the Rutherford Phase remains uncertain.

Although no well defined Tchula assemblages are currently reported from northwestern Tennessee, the McCarty site in northeast Arkansas (Morse 1986) indicates possible contents of Tchula assemblages in this portion of the Mississippi Alluvial Valley. The recovered materials include Tchefuncte Stamped, Tammany Punctated, Cormorant Cord-Impressed, Mulberry Creek Cord-Marked, Withers Fabric-Impressed (rare), and Baytown Plain pottery, Weems projectile points, stone and copper beads, a limonite reel-shaped gorget, biconical baked clay objects, a chipped adze, and a celt (Morse 1986:79-89). The assemblage documents the continued occurrence of baked clay objects into the Woodland period in the general region, and suggests that Withers Fabric Marked did not become common until the subsequent Middle Woodland period.

At this time, the Early Woodland period is very poorly defined in the Obion River area. No clear cultural sequence, or evidence for burial mound ceremonialism or subsistence change has been documented. Mound ceremonialism is well documented to the south, however, at Pinson Mounds, in the subsequent Middle Woodland era. While a shift to a greater dependence on horticulture may have occurred (e.g., Asch and Asch 1985), actual evidence for such a change is lacking. What is needed are single components dating to

GENERALIZED PREHISTORIC CHRONOLOGY FOR NORTHWEST TENNESSEE
DIAGNOSTIC LATER WOODLAND--MISSISSIPPIAN PROJECTILE POINTS

Approx. Date	Culture Period	Diagnostic Traits
AD 1600		
	Late Mississippi	Shell-tempered pottery including water bottles, bowls, effigy vessels, and globular pots with great variety in decoration; small triangular arrow points; flat-topped platform mounds.
AD 1200		
	Early Mississippi	Clay-tempered pottery including, bowls and globular pots, small triangular and stemmed points, and flat-topped platform mounds.
AD 900		
	Late Woodland	Clay-tempered pottery including plain and cordmarked bowls and subconoidal pots, small stemmed and notched points.
AD 500		
	Middle Woodland	Pottery tempered with clay or crushed quartz including plain and cordmarked bowls and subconoidal pots, often with crosshatched rims and occasionally with incised and/or stamped decorations; large triangular and stemmed points such as Frazier and Bakers Creek; conical burial mounds.
AD 300/400		



(Sources: Smith 1979a, 1979b:78)

Figure 10
Diagnostic Later Woodland - Mississippian Projectile Points.

this period, or stratigraphic excavation samples that bracket the Late Archaic through Middle Woodland periods. Comparatively few good stratigraphic column samples exist in this general region, aside from the definitional work at Bynum, Pharr, and Pinson (Cotter and Corbett 1951; Bohannon 1972; Mainfort 1986b). As such, a major research challenge lies in defining Early Woodland occupations. Grog tempered ceramics were found on 14 of the project sites, indicating fairly substantial use of the area during the Early or subsequent Middle Woodland period.

Middle Woodland (2,500 - 1,500 B.P.)

Post-Tchula occupations in the Obion River area are identified primarily by the occurrence of specific ceramic types. Mainfort (1985:5-6; 1986a:56) has argued that fabric impressed pottery is an important horizon marker (see also Jennings 1941 :91); limestone, grog, and sand tempered pastes, and combinations of these pastes, have been observed on fabric marked and other pottery finishes in the general region. Major (and not so major) paste categories have been equated with specific taxa, such as limestone temper with Long Branch Fabric marked, grog with Withers Fabric Marked, and sand with Saltillo Fabric Impressed. Mixed sand/grog tempered pastes have been variously described as Baldwin, Tishomingo, or Thomas wares in the general region (Jennings 1941:199-200; Cotter and Corbett 1951:19; Phillips et al 1951:141-142; Smith 1979a; Ford 1981). Phillips (1970:54-55) established the category Baytown Plain, var. Thomas to accommodate grog tempered plainwares with a sandy texture; he specifically suggested that clay sources, and not specific cultural preferences, probably determined much of the observed variation.

A Thomas-Baldwin-Tishomingo continuum has been reported in the Obion River region, within a general Middle Woodland time frame (Smith 1979a:77), although it has been argued that overly fine chronological distinctions have been made of what are probably comparatively minor differences in paste (Mainfort 1986a:56). Other wares dating to this general early Middle Woodland time level include Cormorant Cord Impressed and Twin Lakes Punctated, finishes frequently found on both sand and grog tempered sherds (Phillips et al. 1951:73,76; Smith 1979b:20). A decline in fabric impressing, and an increase in cord marking, appears to characterize the later Middle Woodland (Phillips et al. 1951:76,87; Ford 1981:67; Mainfort 1986a:59). In the absence of secure local taxonomies, paste and surface finish attributes of recovered project ceramics are provided in the present volume, together with "best fits" with local taxonomies. Points of the Flint Creek cluster (Ensor 1981) are also thought to date to this time level (Mainfort 1985:10).

Later Middle Woodland occupations in western Tennessee are recognized primarily by the presence of grog tempered Baytown Plain and Mulberry Creek Cord Marked ceramics; some sand inclusions may be present in the paste.

Ceramics characterized by zoned punctated and dentate stamped wares resembling the Havanna Hopewell and Marksville types have been infrequently noted in the general region, indicating that the occupants of western Tennessee participated at some level in the interregional ceremonial and exchange network known as the Hopewell Interaction Sphere (Caldwell 1964; Struever and Houart 1972). The nature of Hopewell/Marksville influence in the Obion River area is not well understood, and would be an ideal subject for research if intact components could be discovered. The closest major regional center of the Hopewell interaction sphere is at the Pinson Mound Group, and smaller burial mound sites are known from elsewhere in western Tennessee (Smith 1979b).

From approximately 100 B.C. to A.D. 200, the Pinson Mound Group, located approximately 50 miles south of the study area on the South Fork of the Forked Deer River, was a major center, rivaling any to be found in eastern North America at the time. The relationship of this center to the surrounding western Tennessee hinterland is not well understood. Mainfort (1985:10-11) has noted that major population increases occurred in the Forked Deer drainage during the interval Pinson was prominent. Little or no increase was observed in the Wolf and Loosahatchie drainages immediately to the south, however, suggesting a geographically restricted population base for the center. Broster and Schneider (1977:64-66) have argued that, along the Forked Deer near Pinson, base settlements were located on terraces overlooking the floodplain, with extractive type camps scattered through the uplands. What was happening in the Obion River drainage at this time is not well understood. No major centers are known, although the incidence of ceramics and projectile points thought to date from this period suggests some occupation.

Terminal Middle Woodland/Initial Late Woodland occupations in the general northwestern Tennessee area are identified by the presence of grog tempered ceramics of the Baytown phase (Phillips 1970:903-904; Mainfort 1985:10). Baytown phase assemblages are characterized by Baytown Plain and Mulberry Creek Cord Marked ceramics, with lesser occurrences of Larto Red Filmed, Evansville Punctated, Alligator Incised, possible Coles Creek Incised varieties, and occasional sand tempered sherds. Small stemmed forms, as well as small to medium sized triangular projectile points, appear to be diagnostic of both the late Woodland and the Mississippian in the region (Morse and Morse 1983). The major center at Pinson was abandoned by ca. A.D. 500 (Mainfort et al. 1982:18), and centers even remotely comparable in extent do not re-emerge until the Mississippian period. Since few Middle Woodland sites outside of the immediate Pinson Mounds area have been examined in the immediate region, inferences about settlement diversity, ethnic units, and social organization are highly speculative. A number of sites with grog tempered cord marked and fabric impressed pottery were found during the current study, suggesting moderate Middle Woodland period use of the area.

Late Woodland Occupations (ca. 1,500 - 1,200 B.P.).

Perhaps one of the most exciting periods for research in the Mississippi Alluvial Valley at the present is the Late Woodland period. During this period, the foundations of the cultural adaptation known as Mississippian appear to have developed in the general region. Many of the specific characteristics traditionally equated with Mississippian are now thought to appear during the Late Woodland. Archaeological investigation of the Late Woodland in this region thus offers the opportunity to examine the emergence and expansion of Mississippian culture. In western Tennessee, Late Woodland components are thought to be characterized by Baytown assemblages, reflecting a continuation of Middle Woodland trends (Smith 1979b:21). Beyond the obvious importance of documenting the nature of this transition, an additional research topic includes looking for possible connections between the Coles Creek cultures further to the south in the Alluvial Valley, and Baytown/Late Woodland developments in the western Tennessee area. The ultimate source for much of what is called the "Mississippian" adaptation, it is argued, may well lie in this direction (James B. Griffin, personal communication 1986). Little evidence for later Woodland occupation was found in the study area.

MISSISSIPPIAN OCCUPATIONS (ca. 1200 - 300 B.P.)

Early Mississippian (ca. 1200 - 1000 B.P.)

Some time around or shortly after A.D. 800, Mississippian culture was in place in the southeast Missouri/northeast Arkansas area. It probably took root not long after in western Tennessee. The expansion of Mississippian culture in the general region is an important subject for research and the subject of some debate. By ca. A.D. 1000 Mississippian culture appears to be firmly in place in western Tennessee (Smith 1979a, 1979b; Mainfort 1985:11-12). A number of centers are reported from along and near the Mississippi River, and a particularly strong concentration of sites occurs around Reelfoot Lake. Away from the river, comparatively few major centers, or sites of any kind, have been reported in the interior Western Coastal Plain. Exceptions include the Obion Mound Group, located on the North Fork of the Obion River (Baldwin 1966), where both shell and grog tempered ceramics were found. A minor Mississippian occupation has been documented at Pinson (Morse and Polhemus 1986). While it is possible that outlying settlements from the centers located along the Mississippi or at Obion may occur in the general study area, no evidence for this was found. The area may have been an unoccupied hunting territory, or possible buffer zone during much of the Mississippian.

Later Mississippian Occupations (ca. 1000 - 300 B.P.)

From ca. A.D. 1000 to 1200 or so, Mississippian settlement in the central Mississippi Valley region is characterized by a diversity of site types, including fortified ceremonial centers, smaller villages, and isolated farmsteads (Morse and Morse 1983). Intensive agriculture appears to have become securely established by this time. During the later Mississippian period, settlement nucleation is increasingly evident. Fortified villages become common and farmsteads disappear in many areas. This has been linked to increasing regional population density, and a concomitant expansion of warfare, arising in part over political rivalries, ultimately based on the control of important resources such as trade routes, agricultural lands, or hunting territories (e.g., Larson 1972; Smith 1978; Anderson 1986). Mainfort (1985:10) has observed that later Mississippian settlements in western Tennessee appear to be confined almost exclusively along the Mississippi. Diagnostic artifacts dating to this period include Nodena points, Barton Incised, and Parkin Punctated pottery, and chunky stones. At the present, only the later Mississippian Walls Phase near Memphis has seen much directed research in the west Tennessee region (Phillips 1970:936-938; Nash 1972). Little evidence for Mississippian occupation was found in the study area.

HISTORIC PERIOD OCCUPATIONS (ca. A.D. 1540 - Present)

Records of early historic aboriginal populations, and initial European exploration and settlement in the northwest Tennessee area have been summarized by a number of authors (e.g.,Williams 1928, 1930; Phillips et al. 1951; Smith 1979a, 1979b). Initial European contact in the general project area occurred in 1541, when the DeSoto entrada passed to south, presumably somewhere near Memphis (Brain 1985). The complex Mississippian polities that were encountered in that area offer valuable ethnographic analogs for the late prehistoric Mississippian occupations in the region. Visitation was minimal for the next century and a half, until the last quarter of the seventeenth century. At that time French explorers began to travel up and down the Mississippi on a fairly regular basis, and by the end of the century English traders from Charleston had penetrated this far west (Williams 1928). In 1763 title to the area passed from France to England, and shortly thereafter the area came under the control of the United States. Originally part of the state of North Carolina, in 1796 it became part of the state of Tennessee.

Historic settlement in the interior of northwest Tennessee away from the Mississippi River was minimal until after 1820, when extensive surveying was underway (Vaughan 1983:9). Detailed county histories describe the early American occupation of the region, in the areas of what, in the early 1820's, became Obion, Weakley, and Gibson Counties (Culp 1961; Prins 1965;

Marshall 1970; Vaughan 1983). One of the first occupants of the general study area was the famous frontiersman Davy Crockett, who lived near the South Fork of the Obion in 1823. Population growth was rapid in northwest Tennessee during the later 1820s and 1830s, although there is no evidence for settlement in the immediate project impact zone at any time during the nineteenth century. This is undoubtedly a reflection of environmental conditions in the study area, which throughout much of the Holocene appears to have been low, wet terrain. Both prehistoric and historic populations appeared to have settled well away from the floodplain, on the older, higher terraces (Smith 1979b:23). While hunting, fishing, and travel along the Middle and South Forks of the River unquestionably occurred, no structures, mills, or ferries are present on nineteenth century maps of the project direct impact area (e.g., Vaughan 1983:15).

Early nineteenth-century agriculture emphasized cotton, although corn quickly became the preeminent crop. Small farms, rather than large plantations, were the rule in the general project area. This pattern continued into the twentieth century, although by the 1970s soybeans had replaced corn and cotton as the primary crop (Vaughan 1983:31). Grazing stock was always important, and in the 1960s the general area was one of the richest in Tennessee in terms of milk cow and swine production; these crops have diminished in importance with the rise of massive investment in soybean production in recent years (Vaughan 1983:31). A marked decline in farm population, and a corresponding increase in the size of farms, has characterized local conditions since 1940 (Culp 1961:323; Vaughan 1983:28-35).

Although efforts to clear the local river channels were first initiated in the 1830s, it was only after 1900 that the first large scale construction of drainage ditches occurred, resulting in a rapid transformation of the landscape in the project impact zone (see Chapter II). The drainage, clearing, and cultivation of much of the floodplain area improved living conditions, and a number of structures are indicated on twentieth century maps and aerial photographs of the general project area. Most structures appear to have been temporary hunting camps or blinds, or farm outbuildings. Examples of structures of this kind were found at Site 10, in the immediate impact zone (Chapter VI). Modern hunting stands and blinds were common throughout the project corridor. They were observed every two to three hundred meters or so, reflecting a fairly intensive, short term use of the area for hunting activities. The small scatters of Indian artifacts that were found in and near the project area may reflect the prehistoric equivalent of these activities.

The previous sections of this chapter have outlined the research potential of the study area at some length, providing the framework within which the project was conducted. Such frameworks are critical to the evaluation of resource significance. A review of previous archaeological investigations in the immediate project area is provided in the next chapter.

IV. PREVIOUS ARCHAEOLOGICAL INVESTIGATIONS IN THE PROJECT AREA

INTRODUCTION

Comparatively little previous archaeological investigation has occurred in the immediate project area, in the vicinity of the Middle and South Forks of the Obion River. As the *Scope of Work* for the present project noted, there is a "relative sparsity of existing information on many classes of cultural resources data in the West Tennessee region"(Memphis COE 1986:C-7). Jolly (1985:7-11) and Mainfort (1985) have provided brief overviews of much of what is available from this general area. Most importantly, the Tennessee Department of Conservation's Division of Archaeology maintains in their Nashville office, with the state site files, an updated listing of cultural resource projects, by county, as well as copies of the reports themselves. As of December 24, 1986, 21 reports are recorded describing work in Gibson County, 15 from Obion County, and 21 from Weakley County. The site file and report listings were examined for references about sites in or near the immediate study area (within ca. 5 kilometers); what was present is described below.

PREVIOUS WORK IN THE IMMEDIATE PROJECT AREA

The most extensive work to date touching on archaeological investigations in the immediate project area, and indeed the only report, is Gerald P. Smith's (1979) *Archaeological Surveys in the Obion-Forked Deer and Reelfoot-Indian Creek Drainages: 1966 Through Early 1975.* In this volume, Smith summarized the results of several small survey projects undertaken for the U.S.D.A. Soil Conservation Service, and as part of his own research, in the Obion, Forked Deer, and Reelfoot-Indian Creek drainages. A number of sites were described from near the project right-of-way. Additionally, the state site files contained information about several other sites Smith had recorded in the general area, but had not incorporated into his 1979 report. Most of these sites were revisited as part of the current project, with results as described in Chapter VII.

Smith's report offers an introduction to the archaeology of the study region, and provides general descriptions of many of the artifact categories to be found on sites in this area (see Figures 6,7,9,10). Unfortunately, because his data came from surface or limited testing contexts, he was unable to demonstrate, in other than very general terms, the nature of the local cultural sequence. As he noted "throughout the area there is a pressing need for the establishment of local chronologies through study of stratified sites with

multiple occupations" (Smith 1979:5). A number of areas were examined during this research, including three tracts within the present project's direct impact zone that were visited in 1974 (Figure 11). In addition to his own survey work, Smith recorded a number of sites described to him by local informants. Several sites close to the project area were recorded at this time, including 40GB41, 40GB42, 40GB53, 40GB61, 40WK9, 40WK10, 40WK11, 40WK13, and 40WK14. The nature and results of the work done at these sites, unfortunately, cannot be reconstructed from the report and site file data, which contain only very general descriptions. With the exception of 40WK13, all of these sites were revisited during the present study. Smith's descriptions of these sites, taken from his 1979 report and from the site files in Nashville, accompany the description of these sites given in Chapter VII.

PREVIOUS WORK IN NEARBY AREAS

East of the study area, Broster (1975) conducted a survey along a portion of the Middle Fork of the Obion River in the mid 1970s, recording several sites. He noted that all of the sites detected "appear to represent minor activity areas or temporary habitations...sites tend to be located above the floodplain of the watershed area" (Broster 1975:10). Minimal use of riverine floodplains in this general region was also indicated by Jolly's (1985) study of a 15.2 mile segment of the South Fork of the Forked Deer River. Only five sites were recorded, in spite of an extensive, carefully conceived and executed program of pedestrian survey, bank inspection, and deep testing. Other work in the general area include small surveys associated with road construction or bridge replacement (e.g., Ward 1985). Cultural resource overview documents have been prepared for several federal properties in the northwest Tennessee area, including for the Milan Army Ammunition Plant to the south (Smith and Hartsell 1984), the Reelfoot and Lake Isom National Wildlife Refuges to the northwest (Dickson and Campbell 1979), and the Hatchie National Wildlife Refuge to the west (Smith 1979a). These provide valuable summaries of the work conducted on these areas, as well as available evidence for the local cultural sequence. Finally, a number of surveys have been conducted along adjoining or nearby drainages , that provide useful comparative information on the archaeology of the region (e.g., Dye 1975, Peterson 1979a, 1979b; Weaver and Smith 1984).

REGIONAL STUDIES

The central Mississippi Alluvial Valley and adjacent areas has long been recognized as one of the richest archaeological areas in eastern North America, in terms of the wealth and complexity of prehistoric settlement. As noted above, several reports detail previous archaeological investigations and

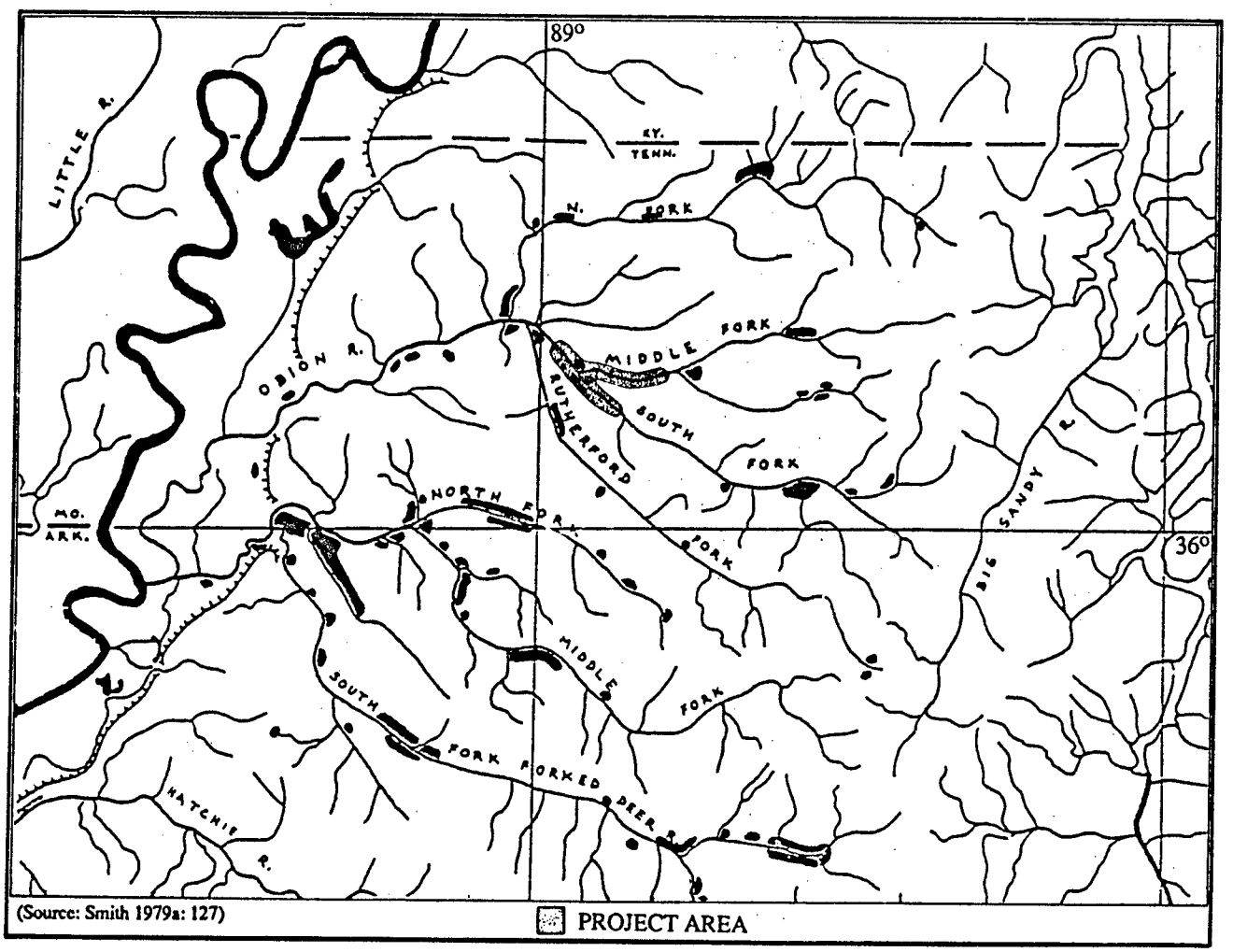
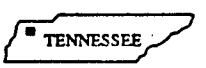


Figure 11
Previous Architectural Investigations,
1974 Memphis State University Survey.



Obion River Survey Project

the cultural history of the western Tennessee area. Perhaps the most notable overview of the prehistory of this region is by Phillips (1970), who formulated and reviewed in depth evidence for periods and phases throughout the Lower Mississippi Alluvial Valley, including in the vicinity of western Tennessee.

Phillips review begins in Poverty Point/Late Archaic times and follows on through the sequence to the Mississippian. Periods discussed by Phillips include: Poverty Point, Tchula/Early Woodland, Marksville/Middle Woodland, Baytown/Middle to Later Woodland, Coles Creek/Late Woodland, and Mississippian. Although most of Phillip's discussion is drawn from work in southwest Tennessee, and from across the Mississippi in Arkansas and southeast Missouri, his overview provides a good general framework from which to evaluate local, northwest Tennessee-Obion River cultural developments. Morse and Morse's (1983) general synthesis on The Archaeology of the Central Mississippi Valley also helps to place the prehistoric occupations in western Tennessee within a broad perspective. The general periods employed in these studies, in fact, guided the development of the research design elaborated in Chapter III.

GENERAL OBSERVATIONS

From inspection of the local literature, it is evident that certain parts of the local cultural sequence are better defined, and more easily recognized, than others. PaleoIndian, Early Archaic, and Mississippian components, for example, can be readily recognized by the presence of highly distinctive projectile points; Mississippian components can also be identified by the presence of shell tempered pottery. The general Archaic cultural sequence for the area inferred by Smith (1979a, 1979b), in general, is similar to that noted in central Tennesse (Lewis and Kneberg 1961; Faulkner and McCollough 1973), and in northern Mississippi (Ensor 1981). A large number of types are employed to describe local hafted bifaces, particularly those occurring later in the Archaic sequence. Because the observable variation between many of these categories is slight, classification of local projectile points can be a highly confusing undertaking in all but the most unambiguous cases. While type assignments were attempted in the present report (in conjunction with the advice of local authorities), no great confidence is placed in many of the assignments. Instead, detailed measurement, description, and illustration was employed (Figure 22, Appendix I-2), with probable dates assigned to each specimen in the individual site descriptions.

As noted in the previous chapter, the identification of local prehistoric ceramic assemblages is characterized by a comparable level of confusion, in spite of sincere effort on the part of local authorities to resolve these problems (c.f. Smith 1979, Mainfort 1986b). Fortunately, a number of key types and tempers occur that, if present, can help to closely date an assemblage. As is

the case with the most useful projectile point types, this information is derived from solid work in other areas, and at varying distances. In the Reelfoot and Lake Isom National Wildlife Refuge overview, for example, Dickson and Campbell (1979) described almost all the recovered ceramics in terms of Phillips (1970) Lower Mississippi Alluvial Valley typology. Smith's (1979b) use of the northern Mississippi Baldwin and Thomas series (Jennings 1941; Koehler 1966) in his Hatchie National Wildlife Refuge overview is another example of this use of extralocal sequences.

Many ceramic analyses from northwest Tennessee, upon inspection, are little more than typological comparisons with Mississippi Alluvial Valley ceramic types, central Tennessee types, or northern Mississippi types. Given the general absence of thorough artifact description in most of these reports, however, the accuracy of these classifications cannot be assessed. In many cases, furthermore, justification for the use of a particular extralocal sequence is not provided. The background sections for Dickson and Campbell's (1979) Reelfoot and Isom National Wildlife overview, for example, contained an extensive discussion of the Middle Tennessee Woodland ceramic sequence, with minimal discussion of the Mississippi Alluvial Valley sequence. The ceramics recovered, however, were largely classified following Phillips' (1970) taxonomy. Nowhere in this report is there discussion of the utility or appropriateness of either the Middle Tennessee or Lower Alluvial Valley sequences to the study area. Evaluative statements and analyses are needed locally.

The use of extralocal typologies to describe northwest Tennessee ceramic assemblages may ultimately prove correct. Wherever possible, researchers need to to attempt to test the utility of such typologies, minimally by noting similarities and differences in stratigraphic/temporal context, assemblage associations, and sorting attributes. This remains to be done in detail in the immediate or even general project area. The Obion River area may well be characterized by relatively unique (at least at the variety level, sensu Phillips 1970:24-28), or at least previously unrecognized, Woodland and Mississippian ceramic assemblages. Since virtually no detailed artifactual descriptions exist from the area, this focus to the present investigations was thought to be particularly important. Once stratified sites yielding large artifact samples are excavated and reported from this part of northwest Tennessee, much of the current ambiguity will resolve itself. Until that time, detailed description, and discussion, about the kinds of remains that are found in the area will help set the framework for eventual interpretation.

V. FIELD AND LABORATORY METHODS

INTRODUCTION

In this chapter, field and laboratory procedures used during the Obion River Survey Project are described in detail. These encompass the specific field, analytical, and reporting methods and procedures followed in each phase of the investigation. The proposed methods are in concordance with the *Scope of Work*, and all relevant Federal guidelines. Specifically, they are designed to conform to the recently adopted (effective September 1, 1986) "Minimum Reporting Requirements" published by the Tennessee Department of Conservation, Division of Archaeology.

BACKGROUND AND LITERATURE SEARCH

From December 22 through 24, 1986, the project Principal Investigator visited Nashville and examined records and archaeological literature at the Tennessee Department of Conservation's Division of Archaeology. This included the county site files and listings of cultural resource investigations for Obion, Weakley, and Gibson counties. These were examined specifically for information about sites or previous investigations in or near the project area. The nature of the project was discussed with Mr. Nick Fielder, Tennessee State Archaeologist, who provided helpful observations about where sites were likely to occur, as well as copies of relevant survey reports from the area. Site form reporting requirements were discussed with Ms. Patti Coat, the Site File Curator. The National Register of Historic Places for Tennessee was consulted, to see if any National Register Sites were located in the project area (none were).

While in Nashville, Mr. Ed Lewis, Assistant State Soil Scientist with the U.S. Department of Agriculture's Soil Conservation Service was contacted, and information obtained about soil conditions in the project area. Near the project area, local and university libraries were examined, including the Tennessee Special Collections room at the University of Tennessee at Martin, and the Martin Branch of the Weakley County library. Local experts contacted included Robert Mainfort of Pinson Mounds State Archaeological Area, Pinson Tennessee, and Dan and Phyllis Morse of the Arkansas Archeological Survey's Northeast Arkansas Station in Jonesboro. Visits were made to both facilities, and opinions about the archaeology of western Tennessee, and specific artifacts recovered during the project, were solicited. Finally, two private collections from the general project area were examined; the owners of these collections are kept anonymous here at their request.

Research with the special collections at the University of Tennessee, Martin, included examination of early maps and accounts of settlement for evidence of historic land use in or near the project impact area. Little evidence for early settlement near the river was noted, although the area's rich hunting potential was described by no less than Davy Crockett (Prins 1965:26-27). During the fieldwork local residents were asked about historic and prehistoric site locations in or near the project area. A description of all formal consultation efforts, and responses, by date, is included as Appendix II.

FIELDWORK PROCEDURES

The purpose of the intensive survey was to carefully examine the project area with the objective of locating and providing documentation on the boundaries and general character of all encountered cultural resources. This included the reexamination of known sites in or near the right-of-way, as well as the discovery and documentation of new sites. Five cultural properties (three sites and two isolated finds) were found inside the right-of-way, and information was collected from another 20 properties located outside the right-of-way (16 sites and four isolated finds).

The collection of information from sites outside of the right-of-way was undertaken for two reasons, (1) to see if previously recorded sites located near the right-of-way actually extended into it, and (2) to assess the character of local cultural resources. Previously recorded sites up to approximately two kilometers from the impact zone were visited. Previously unrecorded sites encountered outside of the right-of-way during the project investigations were also recorded. Most of these sites were found while walking to or from the direct impact zone. The additional recordation effort was accomplished with the permission and direction of the Contracting Officer's Representative, Mr. Douglas Prescott, who asked that such revisitiation and recordation occur wherever possible, to augment existing information on the archaeological resources of this general area.

The fieldwork entailed three major tasks, each with specific methodologies: (1) site discovery in wooded or overgrown portions of the study area; (2) site discovery in open agricultural lands in the study area; and (3) intensive data collection at each of the three sites found in the project right-of-way, including datum placement, mapping, boundary definition, controlled data collection (surface collection or systematic shovel testing), and test pitting.

Scheduling of Fieldwork

Field investigations in the project area were initiated on January 5, 1987, and ran through January 23, 1987, under the direction of Mr. David G. Anderson.

A crew of four was in the field for fifteen working days, consisting of Anderson and three research assistants, Mr. Michael Griffin, Mr. Joel Jones, and Ms. Kathy Mulchrone. The field crew time was supplemented by the full time participation, for five days, of Mr. David Jacobs, a local resident who provided a boat and participated in the river bank survey. A total of 60 person-days were spent in cultural resource field investigations in the project area by the project technical staff. The entire right-of-way for both the Sharon and Sidonia portions of the project was examined, employing pedestrian survey, subsurface shovel testing, and inspection of channel banks from the boat and on foot. A running log of daily activity was kept, and has been curated with the project collections and records. Weather most days was characterized by cloudy skys, with temperatures in the mid to high 30's, although some fluctuation up to 15 degrees above and below this average occurred. Only part of one day was lost due to rain, and the only snowfall to cover the ground more than a few hours occurred the next to last day, during the testing phase. The cold weather meant minimal underbrush was present in overgrown areas, while the absence of snow, coupled with post-harvest field conditions, meant cleared areas offered unusually good surface visibility.

The project was conducted in two parts, a site discovery phase, and an intensive data collection phase. During the site discovery phase, which occupied the first ten days of the project, the entire survey area was examined using the procedures described below. The final five days of fieldwork were spent in intensive data collection at the three sites found during the survey, and in a boat reconnaissance of the river banks. At each of the three sites in the right of way, permanent datums were established usiong lengths of iron rebar, detailed maps were shot in, site conditions were recorded, and controlled surface and subsurface collections were made.

Field investigations during the general survey included the pedestrian inspection of every portion of the project right-of-way, with crew members dispersed along transects no more than 30 meters apart. In cleared or plowed areas, transects approximately ten to fifteen meters apart were used, to ensure comprehensive coverage in areas of excellent surface visibility. Plowed fields accounted for approximately 40 percent of the project area. In most cases, these fields had been recently harvested or plowed, and were characterized by good to excellent visibility (75 to 100 percent). In overgrown areas, shovel tests were opened every 30 meters, except in flooded areas, or areas of extensive soil disturbance. These shovel tests were 30 x 30 cm, and were carried to a minimum depth of 50 cm, or until flooded. Approximately 40 percent of the project area was in wooded terrain accessible by shovel testing. The remaining approximately 20 percent of the project area was characterized by flooded tracts, water-saturated soils, or areas of massive ground disturbance. The latter terrain category, areas characterized by extensively disturbed deposits, was comparatively rare (under 5 percent of the project area). Descriptions of specific land-use and survey conditions along the project right-of-way are provided in Appendix III.

On the Obion River project, sites were defined as surface scatters of more than five non-modern historic or prehistoric artifacts within areas 30 X 30 m in maximum extent, or any area yielding two consecutive positive shovel tests. Of the three sites found in the direct impact zone, two were found in overgrown areas and one was found in a cultivated field. Five or fewer artifacts from larger surface areas, or isolated positive shovel tests were considered *isolated finds*. Two isolated finds were found in surface contexts in the direct impact zone; no isolated artifacts were found in shovel tests.

Every patently nonmodern artifact found during the fieldwork was collected. Because of the alluvial setting, any rock or gravel fragment observed was also collected. Two exceptions were made to this total collection strategy. Rock was not collected near roadways employing gravel fill, and pieces of field limestone were not collected. Obviously introduced gravels were found immediately adjacent to roads in several areas, and discussions with local farmers indicated a recent origin for the occasional limestone gravel fragments observed in cleared fields in the right-of-way.

In addition to the pedestrian survey of the project right-of-way, a 14 foot motor boat was used for a five day period to examine bank profiles throughout the project area. This was done by project archaeological team members, assisted by Mr. David Jacobs, a local farmer and commercial fisherman who had worked the river for years. Project bank cuts were also examined by Dr. John Foss of the Department of Plant and Soil Science at the University of Tennessee, Knoxville. Dr. Foss visited the project area for three days, one of which was spent examining bank profiles with the Principal Investigator, and the other two obtaining soil samples from project sites. The bank inspection effort consisted of drifting parallel to and alongside the bank and visually inspecting the eroded face. Where it was safe to get out of the boat and walk along the bank, this was done; shovels or trowels were used to obtain clearer views of the deposits in these areas. No sites or isolated finds were found during the bank inspection.

Site Discovery in the Wooded Portions

The major site discovery technique employed during the Obion River Survey Project was systematic shovel-testing along the right-of-way. In all wooded, nondisturbed or non-flooded areas, 30 by 30 cm shovel tests were excavated to depths of up to 50 cm at 30 m intervals. Fill from these tests was screened through 0.25 inch mesh hardware cloth. Areas intensively shovel tested are recorded on the appropriate quadrangle and project blue-line maps (Appendix IV). Positive shovel tests, which occurred in two areas (later designated Sites 10 and 14), were flagged and the locations were marked on the project maps; all artifacts found in these tests were bagged separately.

Site Discovery in Agricultural Fields

The principal site discovery technique in plowed fields with greater than 50 percent surface visibility was pedestrian surface survey. This was accomplished along transects spaced a maximum of 20 m apart. These transects were oriented parallel to the major waterway in the area (e.g., the Middle or South Fork of the Obion River). The single site found in a cleared field within the right-of-way (Site 4) was flagged and the scatter was later piece-plotted. At sites found outside the right-of-way, general collections of all visible artifacts were made. All isolated finds were plotted on project maps.

Intensive Site Documentation: Datum Placement, Mapping, Boundary Definition, and Controlled Data Collection

Permanent datums were established at the three sites found within the project right of way. These datums consisted of three foot lengths of iron rebar driven to ground level in wooded areas. The datum points were flagged with red plastic surveyor tape to assure relocation, and at one site (Site 14), where it was feasible, the field datum was tied into a permanent COE marker.

Using a transit, two 50 m tapes, and a metric stadia rod, data for the preparation of detailed contour maps was collected at each site. A standard surveyors' notebook was utilized to record the angle and distance for each point. At the single site located in a plowed field (Site 4), a controlled surface collection was made over the scatter until no further artifacts were encountered. All surface artifacts were flagged upon discovery, and mapped in from the site datum using the transit and tape; elevations were recorded for each artifact. To insure adequate surface coverage, the entire extent of the scatter was traversed by the project team, following each plow furrow. At Site 4, where 82 artifacts were found, a two-person mapping team recorded the scatter in approximately two hours (see Chapter VI). Although the project Principal Investigator was familiar with this mapping strategy, having conducted mitigation-stage piece-plotting operations at four large open air sites near El Paso, Texas (Anderson and Carter 1985), it can be readily adopted by archaeological teams anywhere in the country. Using this procedure, it is possible to completely piece-plot small scatters (under 200 artifacts) in under two to three hours with a team of four people; much of the time is actually spent carefully searching the site area, and flagging the artifacts prior to mapping them in with a transit and tape. The quality of recovered data is certainly far higher than that typically contained in general collections.

At the two sites found in wooded areas, shovel tests were excavated at 10 m intervals within an uniform grid. Shovel testing proceeded until two sterile units, or obvious off-site or disturbed areas were encountered. All

proveniences were carefully recorded. Standing structures which were not obviously modern (i.e., less than 50 years old) and which were located within the right-of-way were recorded and photographed, with data on construction, state of preservation, and associated materials recorded. Only two such structures were found in the right-of-way, an old hunting shack, and a collapsed farm outbuilding, both at Site 10 (see Chapter VI).

One 1 m test unit was excavated at each of the three sites found in the project right-of-way. These units were excavated using arbitrary 10 cm levels; the exception to this practice occurred at Site 4, where the plowzone was removed as a unit. The test units were taken to 20 cm (two levels) below artifact bearing soils; at each site the units were taken to 50 cm in depth. A 30 x 30 cm test was then opened in the corner of each unit to 40 cm below the last excavated level, or to 90 cm. All fill was dry screened using 0.25 inch mesh. Representative profiles were drawn for each unit, with Munsell charts used to document soil colors. Color and black and white photographs were made of representative profiles and site areas, and are illustrated in Chapter VI. A 7.6 cm diameter auger was used by the project geomorphologist (Dr. John Foss) to obtain a deep (ca. 1.5 to 2.0 m) soil column from near each excavated test unit. All test units and shovel tests were tied in to the permanent site datum with a transit and tape. Upon the close of the fieldwork, all of the excavated units were backfilled; 1986 coins were left in inverted glass jars at the 90 cm level in each of the three excavated test units. A detailed Management Summary, in letter format, describing the results of the project fieldwork, was submitted to the Memphis Corps of Engineers on February 3, 1987.

COMPLETION OF TENNESSEE STATE SITE FORMS

Tennessee Department of Conservation, Division of Archaeology Archaeological Site Forms were completed for each site and isolated find visited during the Obion River Survey Project. Forms were completed for newly discovered sites, as well as for known sites revisited during the project. Completion of the forms was accomplished in consultation with Ms. Patti Coat, Division of Archaeology Site File Curator. To facilitate preparation, facsimile site forms (identical in format and typeface to the state forms) were prepared on an Apple MacPlus, using an OMNIS III data file and a Laserwriter Printer. Completed forms were submited to the site File Curator, Ms. Patti Coate, at the Tennessee Department of Conservation, Division of Archaeology on March 10, 1987. *(Although temporary site numbers are used in this report, the assigned permanent site numbers will be used in the final report in all text and graphics references).*

ANALYSIS

Upon completion of the fieldwork, all artifacts recovered during the Obion River survey project were washed and sorted into major typological and functional categories. The contents from each provenience were then recorded, and the artifacts were catalogued using accession numbers provided by the Tennessee Department of Conservation's Division of Archaeology. A primary emphasis of the laboratory analysis was the determination of occupation span and function at each site in the project area. Towards this end, the analysis included the general description of the prehistoric and historic materials recovered from each provenience; this information, by site and provenience, is given in Appendix I. This was followed by a more detailed examination of potentially diagnostic artifacts, specifically the prehistoric ceramics and all intentionally retouched flake tools. A series of nominal and metric attributes were recorded for each hafted biface, intentionally retouched flake tool, and intact cobble tool, while paste and surface finish was noted for all recovered ceramics. Minimally, count and weight data were recorded for each artifact category; this information, together with typological assignments for these artifacts, is listed in Appendix I. The project artifacts, field records, and analysis notes have been curated at the Pinson Mounds Archaeological Area, Pinson, Tennessee, a facility operated by the Department of Conservation's Division of Archaeology.

SITE LOCATION MAPS

Site locations have been only generally noted in this report, and are illustrated at a scale that will permit only approximate relocation (Figure 2). This was done intentionally, in compliance with the Scope of Work, in an effort to safeguard these sites from possible uncontrolled collection or excavation in the future. Precise locational information for all of the sites examined during this project was submitted with the site forms to the Tennessee Department of Conservation Division of Archaeology. Site locations were plotted on xerox copies of relevant sections of the U.S.G.S. 7.5 minute quadrangles for the project area; on project 1 inch to 400 foot aerials (1981 overflight) supplied by the Memphis Corps of Engineers; and on county highway maps. This information is also included as Appendix IV to this report.

Six originals of the two U.S. Geological Survey 7.5' Quadrangles sheets encompassing the project area -- the Rutherford and Greenfield maps -- will be submitted to the Memphis District, U.S. Army Corps of Engineers upon receipt of final site numbers from the Tennessee Department of Conservation Division of Archaeology. These USGS quadrangles will have the location of each discovered or revisited site clearly marked and labeled with the appropriate site number. Known sites outside the project area are not

illustrated on these maps, unless they provide a vital context for discovered sites. In practice, all new or relocated sites within two kilometers of the project area have been recorded on these maps. The site locations on the quadrangle sheets were drafted by a graphics specialist to assure clarity and legibility, and using permanent marking ink to insure the long term survival of this information.

VI. DESCRIPTION OF SITES IN THE PROJECT IMPACT AREA

INTRODUCTION

Three sites and two isolated finds were located in the project right-of-way. The three sites all came from along the Middle Fork of the Obion River, within the Sharon portion of the study area (Figure 2). The three sites and one of the two isolated finds had prehistoric materials present; two of the sites also had historic materials, while the other isolated find consisted solely of historic artifacts. The three sites (S-4, S-10, and S-14) were found in close proximity to one another, approximately one and a half miles east of the confluence of the Middle and South Forks of the Obion River. All three are located on an old elevated terrace remnant called Beech Ridge that has been bisected by the river channel. Two of the sites (S-10 and S-14) were located by shovel testing in wooded terrain along the north side of the river, while the third site (S-4) was found in a plowed field on the south side of the river. The two isolated finds were found along the South Fork of the Obion River, at the extreme southern end of the Sidonia tract. Each of these sites and isolated finds is discussed in turn below.

SITE 4

Site S-4 consisted of a plowzone scatter of prehistoric artifacts approximately 40 meters in diameter found near the center of a small plowed field immediately south of the channelized Middle Fork of the Obion River (Figures 12, 13). The site was found on January 9, 1987, during the field survey. At the time of survey the site area was in harvested corn, offering excellent surface visibility (ca. 75 percent). A light scatter of prehistoric artifacts was observed, and after a brief examination, was considered an ideal candidate for controlled collection procedures. The site was revisited on January 22 and 23, 1987, and intensively examined. The field area was walked using evenly spaced transects (every other plow row), and all observed surface artifacts were temporarily flagged with red surveyor marking tape. The flagged surface artifacts (N=81) were then piece-plotted with a transit, stadia rod, and tape (Figure 14). Elevations were taken at each artifact, and an additional 26 points were shot in defining the field edge, the tree line, and the river bank. These data were used to prepare a 20 cm contour map of the site area (Figure 12).

The piece-plotting collection procedure proved to be a highly efficient and effective method of documenting the site surface scatter. The four person crew spent approximately two hours locating, flagging, and mapping the artifacts defining the scatter. The scatter map reveals a small, tight cluster of

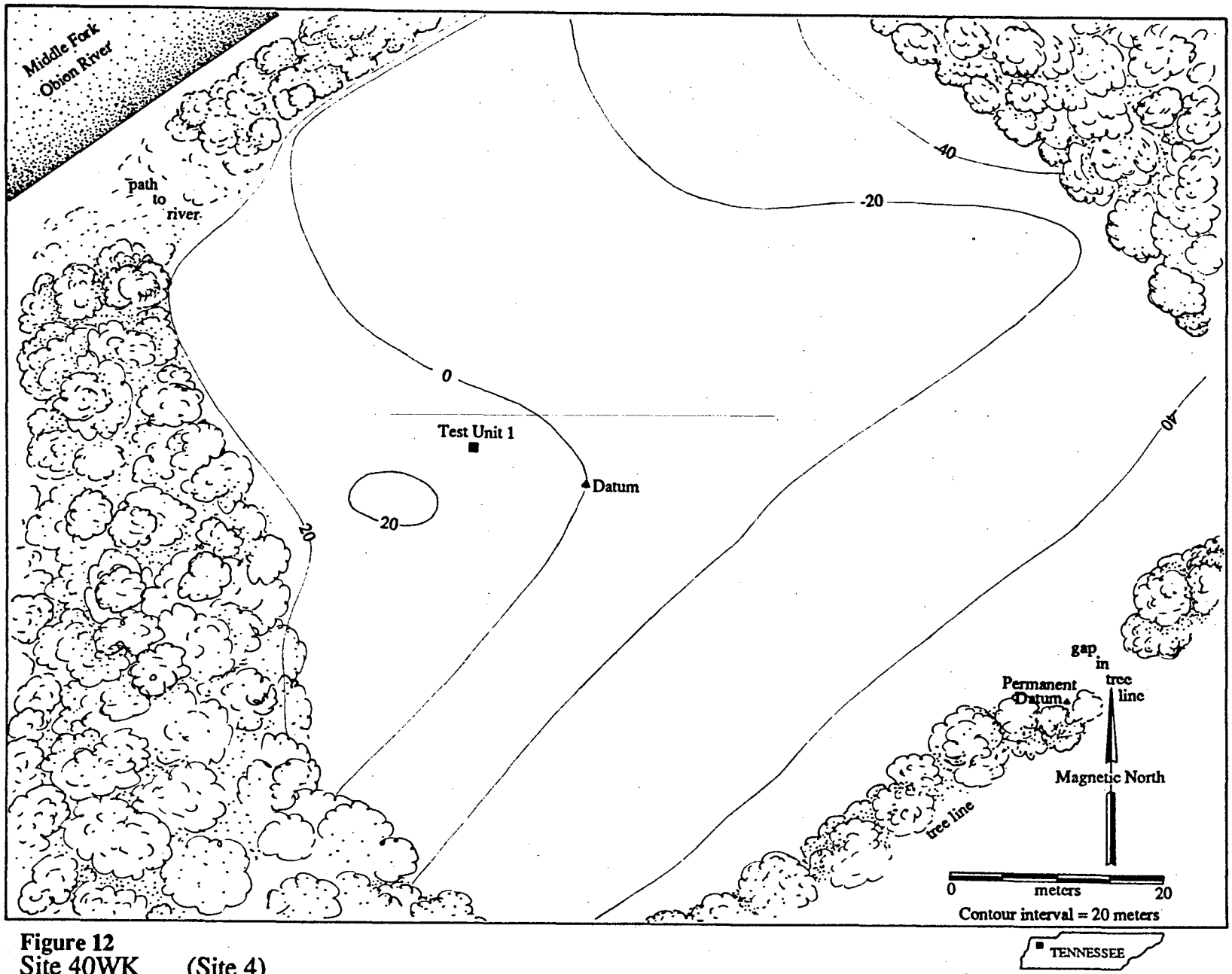
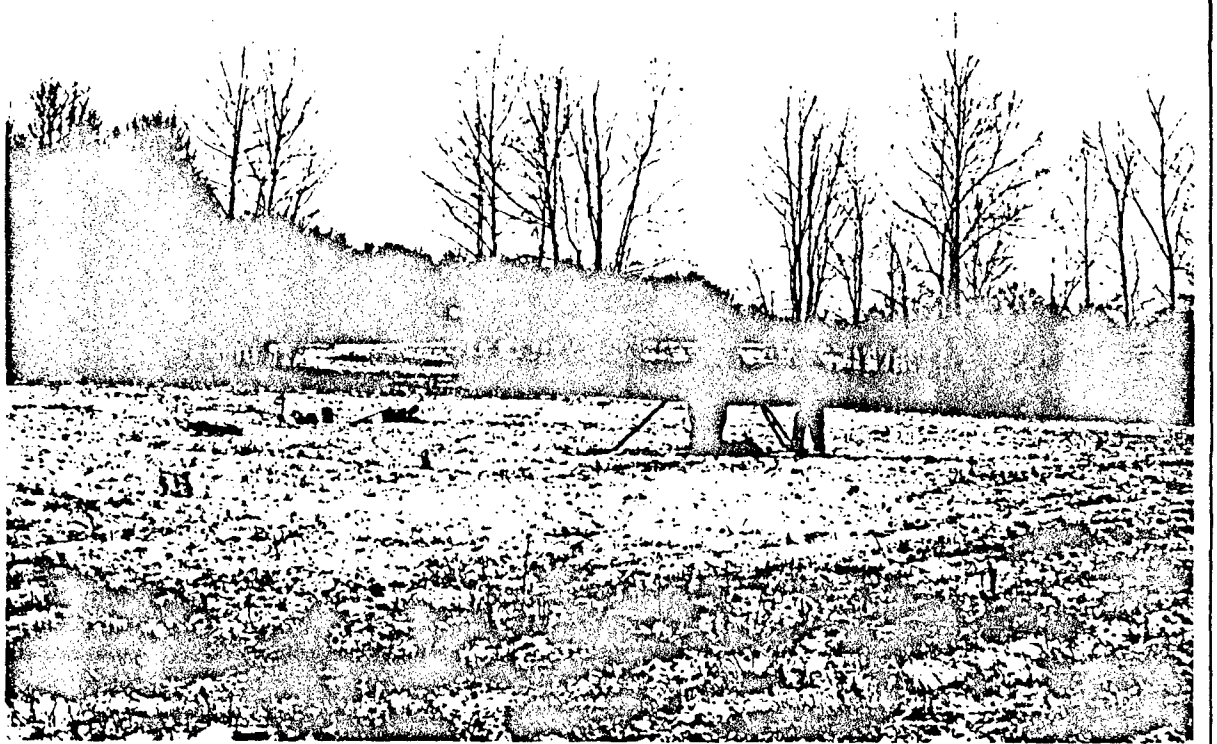
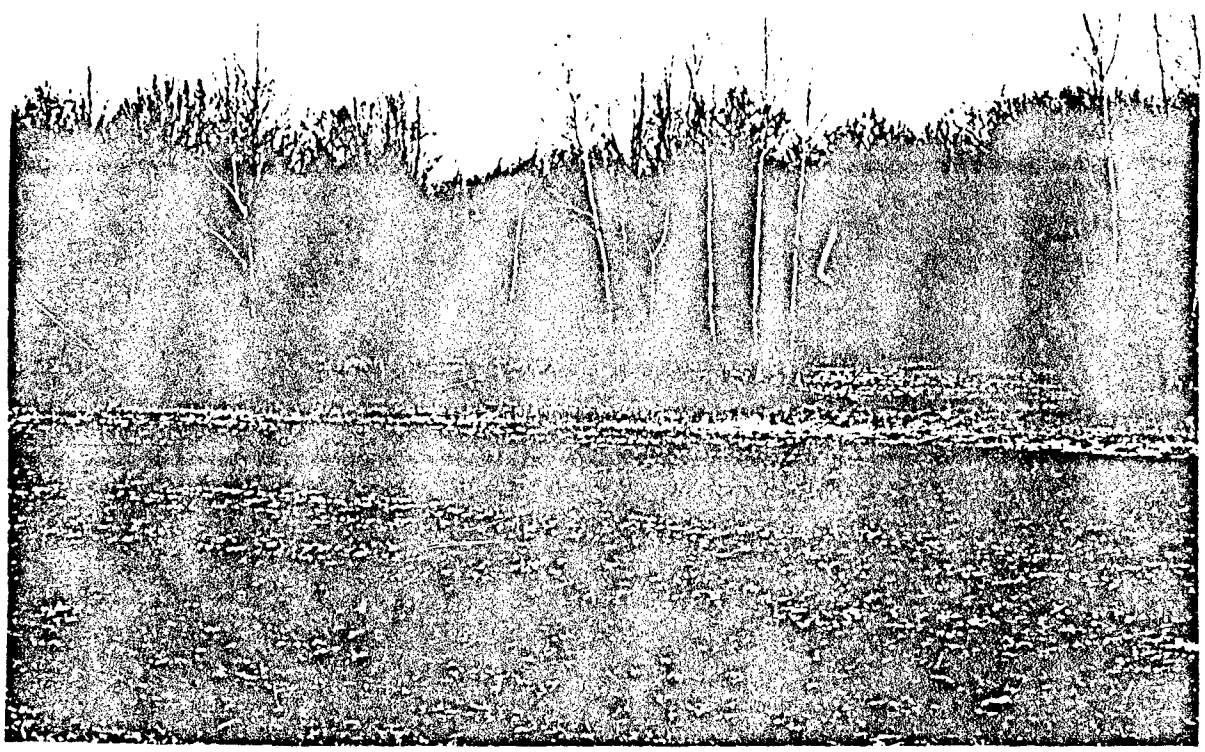


Figure 12
Site 40WK___ (Site 4)
Excavation Units, January 1987 Testing.

Obion River Survey Project



View to the southeast, from near the riverbank. Test unit excavations, January 23, 1987.



View to the northwest, toward the channelized course of the Obion River. The site is in the small field beyond the trenches.

Figure 13
Site 40WK___ (Site 4)
General Setting, January 1987 Testing.

Obion River Survey Project

artifacts, with some outliers, just to the east of a slight rise in the field (Figure 14). This greatly facilitates site interpretation, and subsequent investigation. Placement of the test unit subsequently excavated at the site, it should be noted, was guided by this spatial information. It is highly unlikely that a traditional, general collection procedure, or even a controlled collection using complete recovery within predetermined grid squares or circles, would have revealed the same spatial patterning, or permitted as effective test unit placement.

Based on the time needed to locate and flag all of the site artifacts, a general surface collection could have been made at Site 4 in one third to one quarter of the time it took to piece-plot the artifacts. The resulting data, however, a half kilogram sack of artifacts, would be of little interpretive value. It is doubtful, furthermore, that the tight cluster defining the core of the site would have been as well defined. General surface collection procedures, it is argued, can obscure or confound patterning evident in surface data. The information gained through the minor increase in collection time must be balanced against the irrevocable information loss accompanying more general collection procedures (Anderson and Carter 1985:105).

Eighty one prehistoric artifacts were obtained from the site surface. Precise proveniences are shown in Figure 14, and a description of each artifact is given in Appendix I-1. In brief, 45 unmodified interior flakes, two shatter fragments, 25 wear retouched flakes (flakes exhibiting use damage, but no evidence for intentional flake removal for the preparation of a working edge), four intentionally retouched flakes (flakes with smaller flakes intentionally detached from one or more margins, for the preparation of a working surface), three biface fragments, one small nondiagnostic grog tempered sherd, one small chunk of ferruginous sandstone, and one intact sandstone hammerstone were found (Figure 23f,k,h,m,o). The only potential diagnostic was the eroded grog tempered sherd, which suggests a Woodland component (Figure 23o). The biface fragments were all from unfinished preforms, and were not temporally diagnostic. The general absence of pottery, however, indicates that its use either wasn't an important part of this occupation, or that the primary occupation was preceramic.

A high incidence of unifacial flake utilization was observed over the Site 4 surface assemblage (N=29 wear and intentionally retouched unifaces, accounting for 39.2 percent of all flakes), suggesting that lithic raw material was carefully conserved. Intentional thermal alteration was also common over the flaked stone assemblage (N=52 of 79 chert artifacts; 65.8 percent)(Appendix I-1). By category, thermal alteration was observed on 28 unmodified flakes (62.2 percent), 18 wear retouched unifacial flake tools (72.0 percent), three intentionally retouched unifacial flake tools (75.0 percent), two of the three biface fragments, and on the single shatter fragment. Given the tight artifact distribution, and the generally uniform character of the assemblage (small typically thermally altered and/or utilized flakes), much of

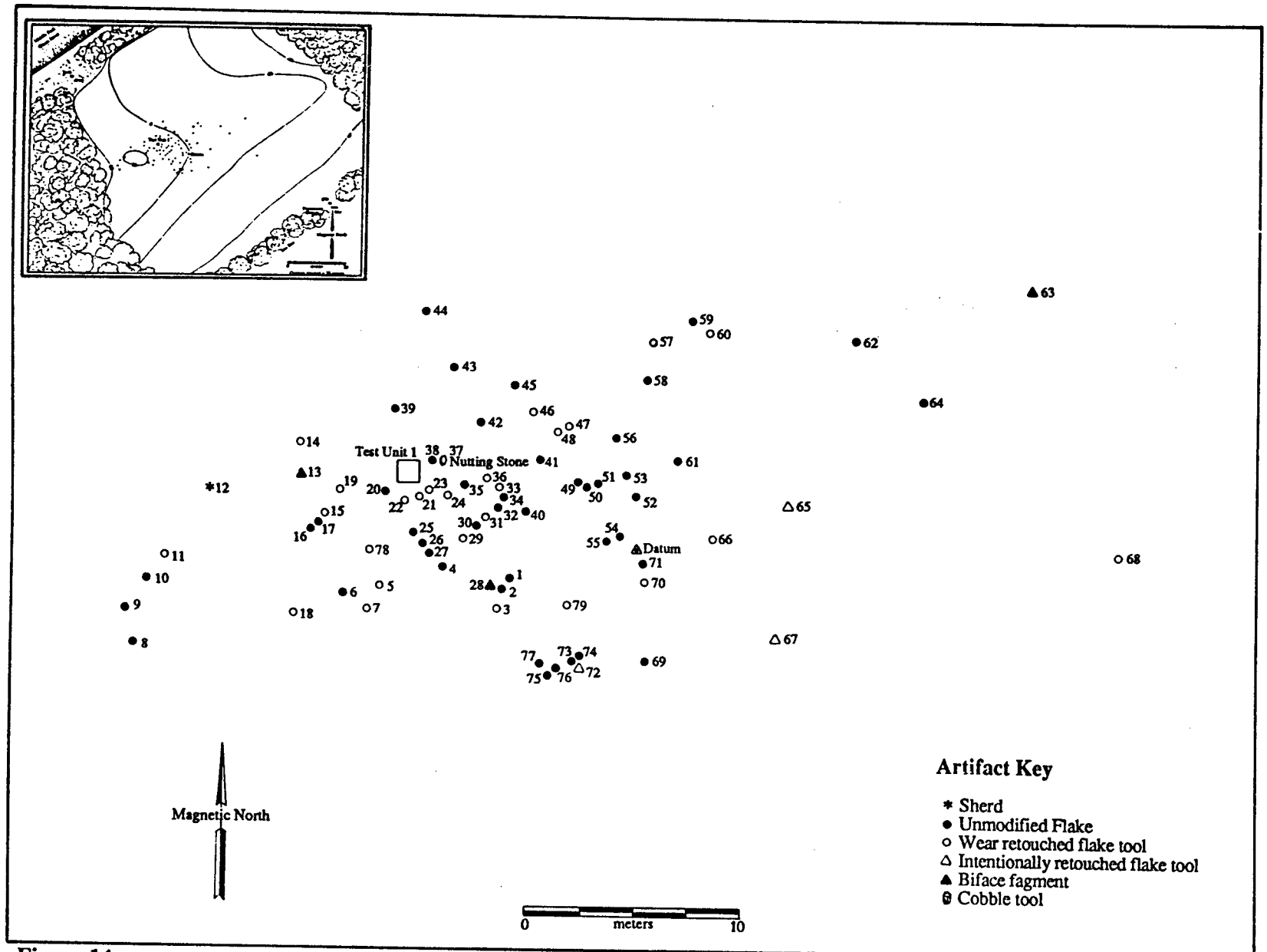
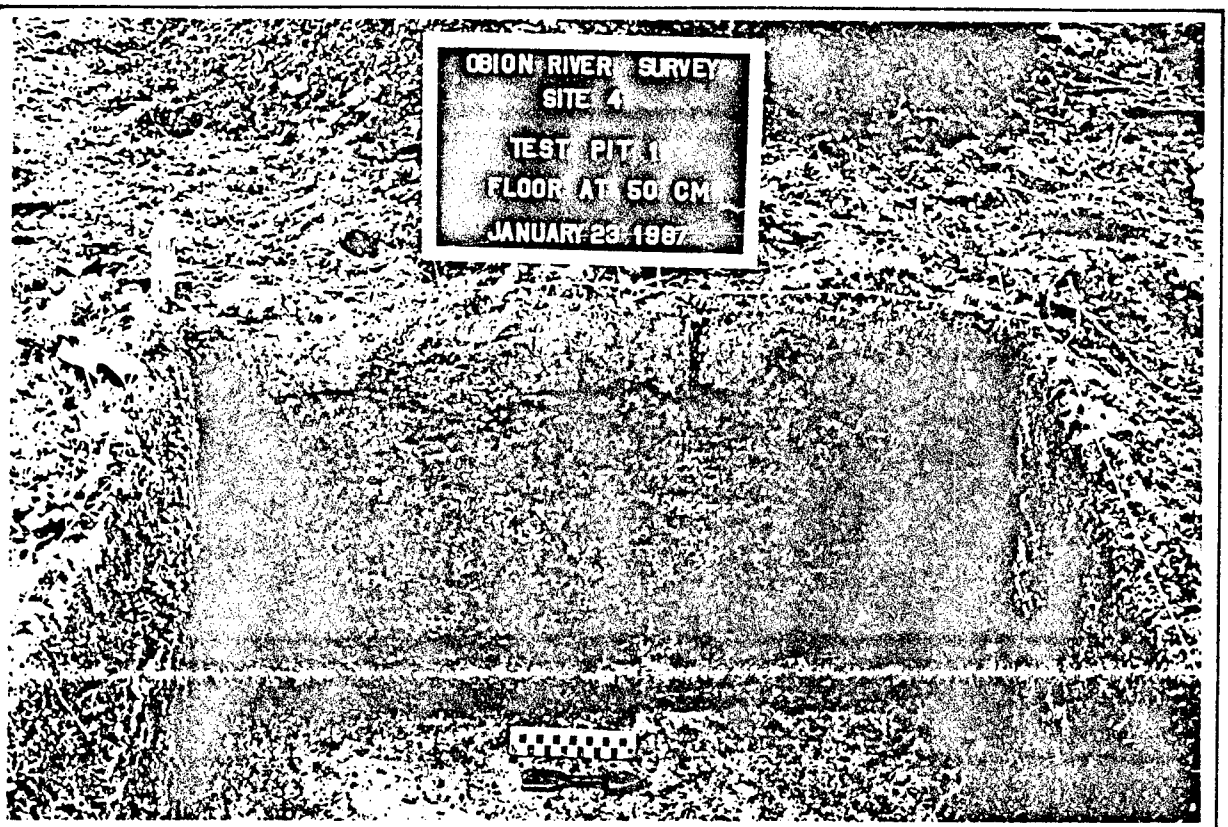
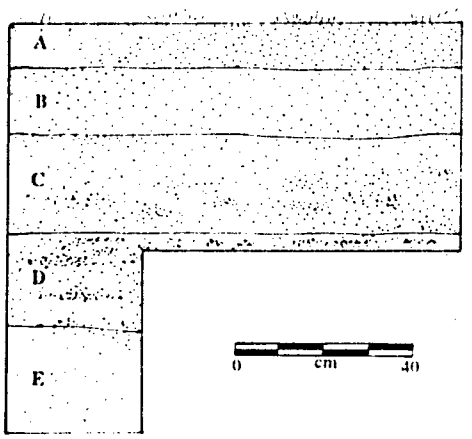


Figure 14
Site 40WK___ (Site 4)
Piece Plotted Surface Artifacts,
January 1987 Testing.

Obion River Survey Project





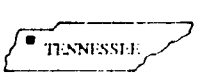
A. Disk Zone (loose). Silt loam. 10YR5/4
B. Ap Plowzone with pronounced plow scars at base (compact-not often worked). Silt loam. 10YR5/4
C. B Horizon. Silt loam. Uniform to ca. 45cm, mottled below. C/D contact indistinct. 10YR4/4-10YR6/6.
D. Mottled B Horizon. Silt loam. Iron/gray silt mottles. 10YR3/3-10YR6/6, 10YR7/2.
E. Mottled B Horizon. Silt loam. Mostly gray, silt loam. D/E contact indistinct. 10YR6/6, 10YR7/2.

Soil Core (7.6 cm diameter) Stratigraphy
Core removed 50 cm south of Test Unit 1

Horizon	Depth	Color	Mottling	Texture	Remarks
Ap	0-20	10YR5/4	none	Silt loam	Non Calcareous
Bt1	20-45	10YR4/4	f1f 10YR6/3 7.5YR5/6	Silt loam	Non Calcareous
Bt2	45-82	10YR4/4	m1d 10YR6/3 7.5YR5/8	Silt loam	Non Calcareous
Bx1	82-110	10YR4/4	m2d 10YR6/2 7.5YR5/8	Silt loam	Non Calcareous
Bx2	110-130	10YR5/3	m2d 10YR6/2 7.5YR5/8	Silt loam	Non Calcareous
C	130-160	10YR5/3	m2d 10YR6/2 7.5YR5/8	Silt loam	Non Calcareous

Notes: Site was nearly level; soil was saturated in upper 0.5 to 1.0 meter; somewhat poorly drained profile; minimal development in the Bt horizon. The fragipan (90-130 cm) has moderate development and possibly extends to depths greater than 130 cm. An excavation would be necessary to positively identify the lower boundary of the fragipan. The weak argillic above the fragipan has slightly more clay than the A and E horizon. The soil indicates a stable surface for a long period (greater than 8,000 years+). Some recent additions and disturbance in the upper 25 cm are likely, however.

Figure 15
Site 40WK___ (Site 4)
Test Unit 1 Stratigraphy (West Wall),
January 1987 Testing.



the surface assemblage looked as though it came from a single occupation.

To further explore the nature of the deposits, a one meter test unit was opened at Site 4. The unit was placed in the vicinity of the densest surface artifact scatter, close to where a number of tools had been recorded (Figure 14). The fill was removed in 10 cm levels to a depth of 50 cm; a 30 x 30 cm area in the corner of the unit was opened in 10 cm levels another 40 cm, to 90 cm below the modern ground surface. All of the fill was screened through one-quarter inch mesh. No cultural features were observed below the base of the plowzone, which was defined by pronounced plowscars, and a noticeable change in soil color and texture (Figure 15).

Two discrete zones were observed within the plowzone, a loose upper disking zone, and a more compact, presumably less frequently worked lower zone. The majority of the artifacts were in the upper of the two zones, suggesting fairly shallow deposits, and minimal sedimentation after site formation. The site area lies on a portion of Beech Ridge, an old, elevated terrace bisected by the Middle Fork, and was probably comparatively high ground throughout prehistory. As such, alluvial deposition would have been minor, at least when compared with that in lower-lying areas.

Ninty four flakes were recovered in the plowzone, together with several pieces of ferruginous sandstone and one unidentifiable, possibly fired clay fragment (Appendix I-1). The only subplowzone remains were a seven flakes in probable root or animal burrow disturbances. Five flakes were recovered in level three, the first 10 cm level below the plowzone; one flake each came from the next two levels. No artifacts were observed in the 40 cm test opened to 90 cm. Deep soil augering, conducted as part of the geomorphological investigations, and examination of bank profiles along the nearby river channel, also failed to detect evidence for deeper deposits.

The test unit assemblage differed from the surface collection in several interesting ways, although given the similar raw materials and treatment it is clear they derive from the same component or components. The screened test unit sample had a far higher incidence of unmodifed flakes, and these were considerably smaller, on the average, than the unmodified flakes found in the surface collection (Appendix I-1). Whereas 39.2 percent of the surface flake assemblage exhibited evidence for utilization, this was observed on less then ten percent (N=9; 8.9 percent) of the test unit assemblage. Evidence for intentional thermal alteration was, however, generally comparable to that observed over the surface assemblage (76.2 vs. 65.8 percent). This suggests that surface collection procedures, even the most controlled, tend to miss and hence underrepresent small, unmodifed flakes.

The Site 4 assemblage, upon surface collection and testing, appears to be spatially restricted, and confined to the upper, plowzone levels of the site. Due to the general absence of diagnostics, the age of the assemblage is cannot

be determined with any certainty. Woodland site use is indicated by the single sherd recovered; whether this sherd dates the remainder of the assemblage cannot, at present, be determined.

SITE 10

Site S-10 was located immediately across from S-4, on a wooded point of land approximately 30 to 75 meters north of the channelized course of the Middle Fork of the Obion River (Figure 16). The old former channel of the Middle Fork loops around to the south of this point of land, between the site S-10 area and the present channel of the river. The site is located on a prominent elevated rise in the river swamp, on the southern extremity of the Beech Ridge terrace remnant on this side of the river. Logging or other partial land-clearing appears to have occurred at some time earlier in the century, since most of the trees present on the knoll were fairly small (under ca. 20 cm in diameter). Complete clearing during the present century, however, appears improbable, as several very large trees were also observed, most along the former channel.

Site S-10 was discovered on January 12, 1987, during the systematic shovel testing operations that were conducted in the overgrown portions of the project right-of-way. The first two shovel tests opened on the point of land defining the site area, in fact, yielded artifacts. Disappointingly, the excavation of another eight tests around these first positive tests failed to yield additional artifacts. Two datums were established, each a three foot length of iron rebar driven flush with the ground and flagged with red surveyor marking tape. From the southernmost datum, on the crest of the landform defining the site, 75 mapping points were shot in using a transit, stadia rod, and tape. This information was used to prepare a 20 cm contour interval map of the site area (Figure 16).

Given the probable age, and prominent position of Beech Ridge in the landscape, it is not surprising that a site is located here. The knoll defining the site rises visibly out of the surrounding floodplain, and offers one of the few elevated, and hence comparatively dry, locations near the river in the study area. What is surprising is how sparse the evidence for prehistoric use of the location actually is. Two probable Mulberry Creek Cord Marked sherds (Figure 23:n) were found just below the surface in the first shovel test (Shovel Test 1), and a single chert interior flake was found just below the surface in a second test (Shovel Test 2) opened 10 meters away. An additional eight shovel tests opened in a ten meter grid around these units failed to detect additional prehistoric remains, and no artifacts were observed in the river bank profiles.

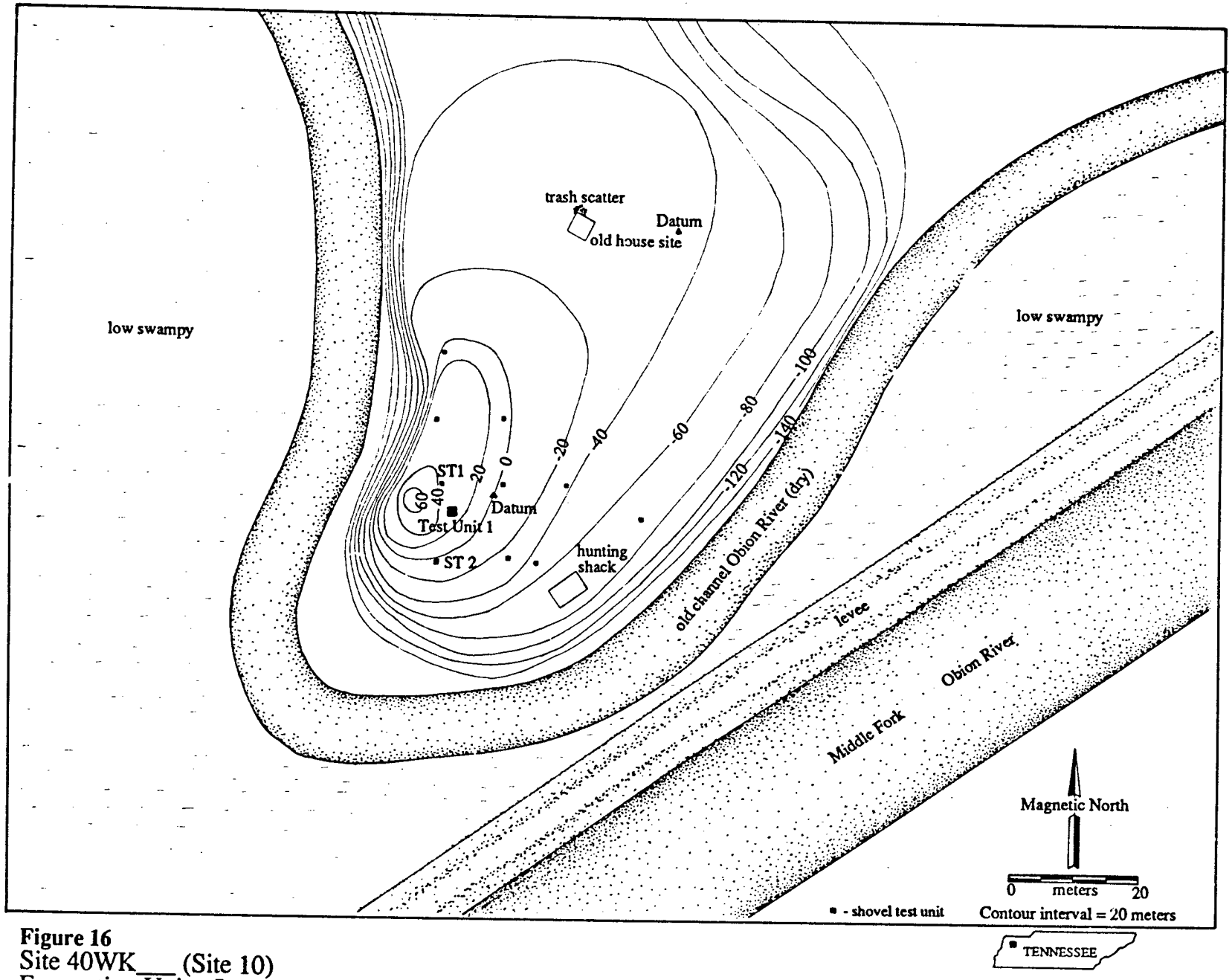
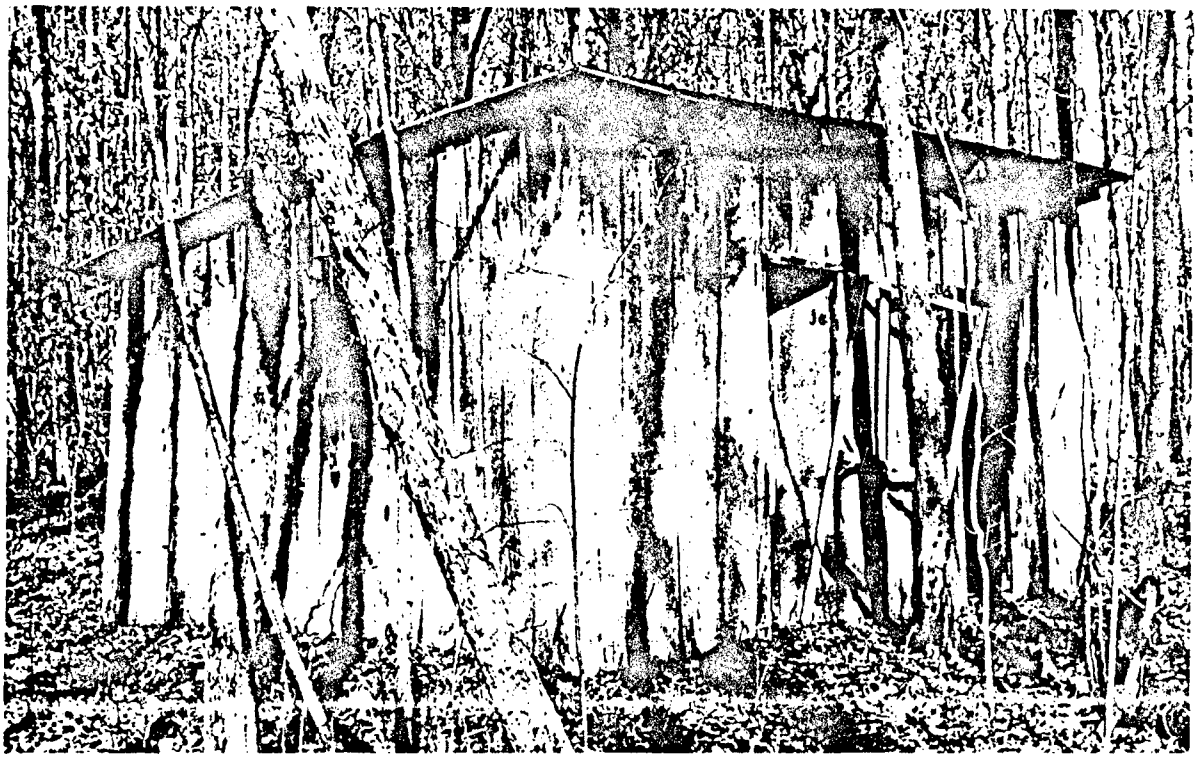
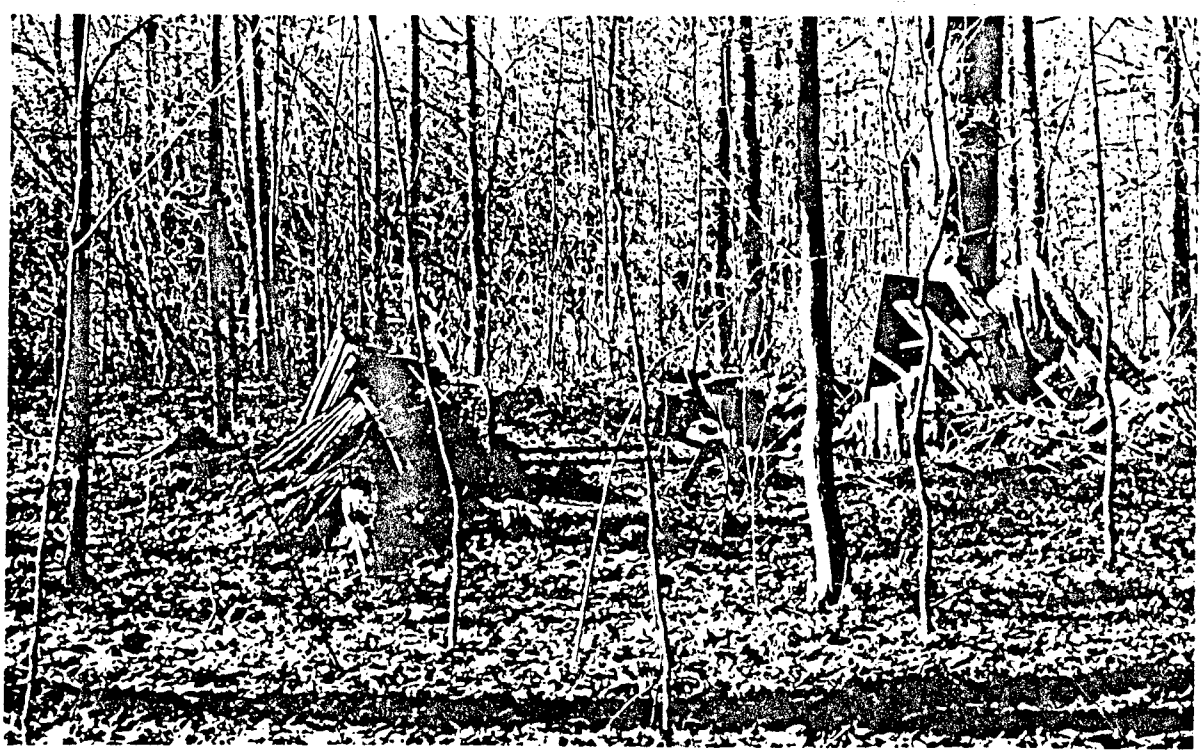


Figure 16
Site 40WK___ (Site 10)
Excavation Units, January 1987 Testing.

Obion River Survey Project

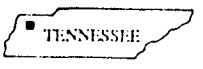


Old hunting shack on south side of site bluff, overlooking the old river channel.



Collapsed farm outbuilding on north side of site bluff.

Figure 17
Site 40WK___ (Site 10)
Historic Structures, January 1987 Testing.

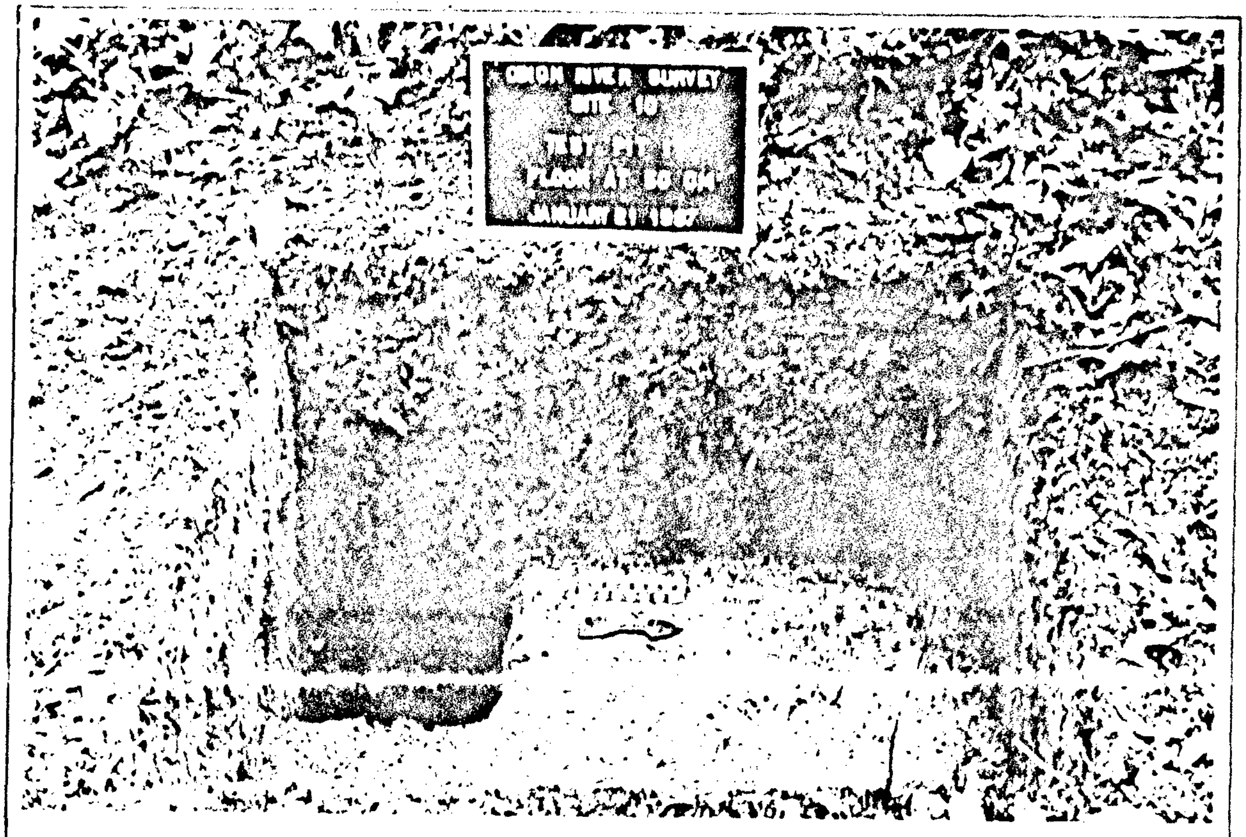


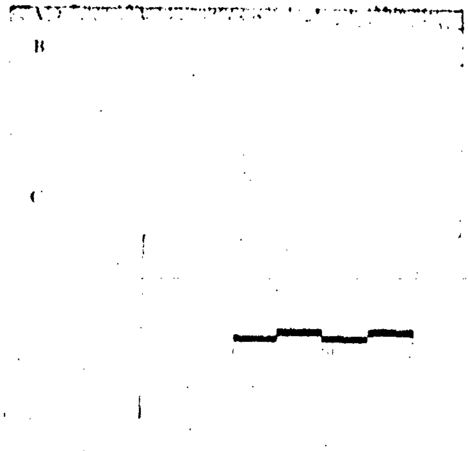
Obion River Survey Project

The most striking evidence for past use of the Site S-10 area dates to the historic era. The remains of two structures are present on the terrace, a solidly built, roofed hunting stand overlooking the old channel, and the collapsed remnants of a farm outbuilding further back on the knoll (Figure 17). These structural features were mapped and thoroughly photographed. The hunting shack, of weathered cypress boards, with a tar paper roof, is extremely well built. Although similar, albeit less elaborate structures or stands were quite common along the channel, this building, with four standing walls, a roof, and a frame door, was by far the best example observed in the study area. The other structure observed in the Site S-10 area was the collapsed remains of a large shed or small barn that originally appears to have measured approximately five by ten meters. This structure appears on the 1954 Rutherford 7.5 minute quad as a temporary building. Only a minor amount of domestic debris (mostly rusted tin cans) was observed around the ruin, although an iron bed frame located squarely in the middle of the debris forms an intersting exception to this pattern. No evidence for a chimney, windows, or for other outbuildings, wells, or privies was observed, however, arguing against this being a farmstead.

To further explore the nature of the site's cultural resources, a one meter test unit was opened in 10 cm levels to 50 cm between the two shovel tests yielding artifacts; again, a 40 x 40 cm area in the corner was opened and screened to a depth of 90 cm. A fairly undifferentiated soil profile was observed, with a deep B horizon below a shallow A horizon/possible former plowzone (Figure 18). Three historic artifacts were found in the first two upper levels, two wire nail fragments, and a 12 gauge shotgun shell base. Seven small chert flakes and two sherds, one Mulberry Creek Cord Marked and one eroded, were also found in the test pit upper levels (Appendix I-1). Only one flake was found below 30 cm, in the 30 to 40 cm level. No plowscars or other evidence for cultural features was observed in the levels.

The low prehistoric artifact density observed at Site 10 was somewhat surprising, given the seemingly favorable location. The artifacts that were found came from the highest part of the landform, on a small knoll immediately adjacent to the former river channel. Only minor, Woodland period use of the area is indicated by the recovered artifact sample, which is quite small. Several fairly dense prehistoric scatters were observed further back on Beech Ridge (see Chapter VII), and it is possible that areas immediately adjacent to the channel were generally avoided, or at least were not favored long-term occupation loci. This pattern continued during the recent historic era, although greater temporary use of the area is indicated during this period.





[illegible]

Soil Core (7.6 cm diameter) Stratigraphy
Core removed 50 cm northwest of Test Unit 1

Horizon	Depth	Color	Mottling	Texture	Remarks
A	[illegible]	10YR 4/2	none	Silt loam	[illegible]
E	[illegible]	10YR 4/3	none	Silt loam	[illegible]
		10YR 5/3			
Bt	20-28	10YR 4/4	none	Silt loam	[illegible]
Bt	28-80	7.5YR 4/4	none	Silt loam	[illegible]
Bt2	80-115	7.5YR 4/4	[illegible]	Silt loam	[illegible]
		10YR 4/4	[illegible]		[illegible]
Bt3	115-150	10YR 4/3	[illegible]	[illegible]	[illegible]
Bt?	150-200	2.5Y 4/3	[illegible]	[illegible]	[illegible]
			[illegible]		
			[illegible]		
			[illegible]		

Notes: [illegible]

Figure 18
Site 40WK (Site 10)
Test Unit 1 Stratigraphy (West Wall),
January 1987 Testing.

SITE 14

Site S-14 was also located on the north side of the Middle Fork of the Obion River, on the elevated Beech Ridge terrace surface, about 500 meters west of Site S-10 (Figure 2). The site, which was discovered on January 12, 1987, was located in woods on either side of a dirt road running down to the river from the top of the ridge (Figures 19, 20). No artifacts were observed in the roadway, which is deeply scraped in its higher reaches, and built up near the channel. The site was found during the systematic shovel testing that characterized field survey in overgrown areas. Prehistoric artifacts, specifically 13 flakes, six small nondiagnostic grog tempered sherds, and one possible baked clay ball fragment, were found in five of ten shovel tests opened at the site (Appendices I-1, I-3). Materials were observed in three tests on the west side of the road and in two tests on the east side of the road. No artifacts were recovered in a shovel test opened in the road, or in four other tests opened adjacent (i.e., at distances of 10 meters) to the positive tests.

The Site S-14 area exhibits massive construction-related disturbance. Much of the lower portion of the point of land the site is located on appears to have been pushed in as road fill, to create a surface leading down to the river. Bulldozer spoil piles were observed off to the sides of the road, and the shovel test profiles exhibited disturbance to depths of up to 70 cm. Most of the artifacts recovered in the shovel tests came from these disturbed soil zones. A shovel test opened in the road indicated that the upper soil layers (to ca 30 to 50 cm) in that area had been removed; these were either pushed downslope towards the river, or off to the side. A vehicle turnaround was located on the last fairly level ground above the former channel, and its construction disturbed much of this area. A temporary datum was established near the center of this turnaround, tied in to a nearby permanent Corps of Engineers Benchmark (Vertical Datum U8-6-86). From this datum, 68 mapping points were shot in with a transit, tape, and stadia rod. This information was used to prepare a 20 cm contour interval base map of the site area (Figure 19).

Dr. John Foss, the project geomorphologist, visited the Site S-14 area on January 19, 1987, and confirmed the disturbed nature of the deposits. Dr. Foss was able to suggest one area, on the western side of the road, where intact deposits from the former land surface might be present, and a one meter test was opened here, between two shovel tests that had yielded artifacts. The unit was opened in 10 cm levels to a depth of 50 cm, with a 30 x 30 cm area in the corner opened to a depth of 90 cm. All fill was screened through one-quarter inch mesh. Some disturbance was noted in the upper levels, mostly fill pushed in by heavy equipment (Figure 21). A complete recent Coca Cola bottle was found immediately below the surface in this unit, giving some idea of the extent of the local disturbance. Other quite recent historic debris (i.e., paper wrappers, plastic fragments) was observed in the upper fill of this unit, and in some of the shovel tests, but was not retained.

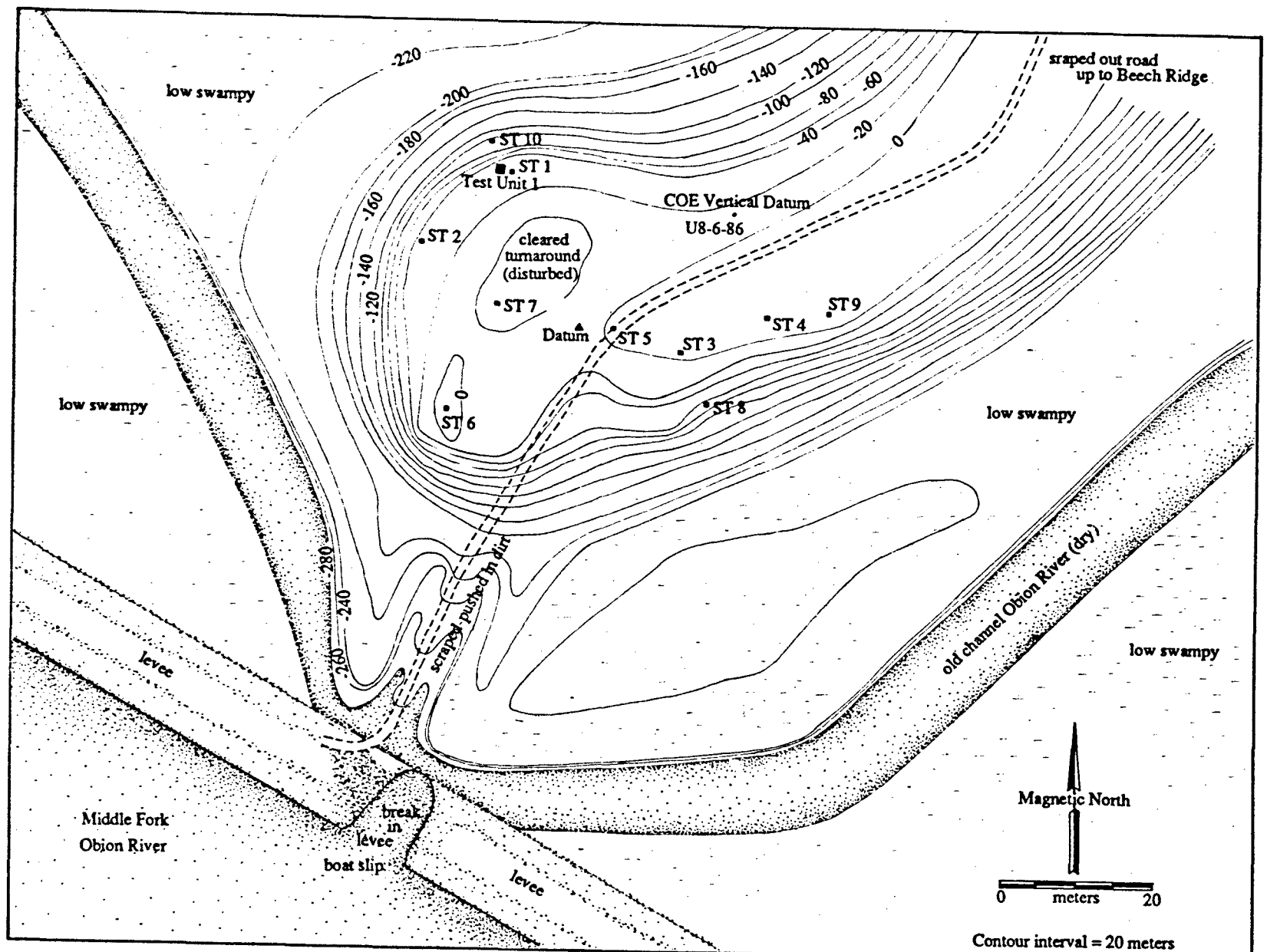
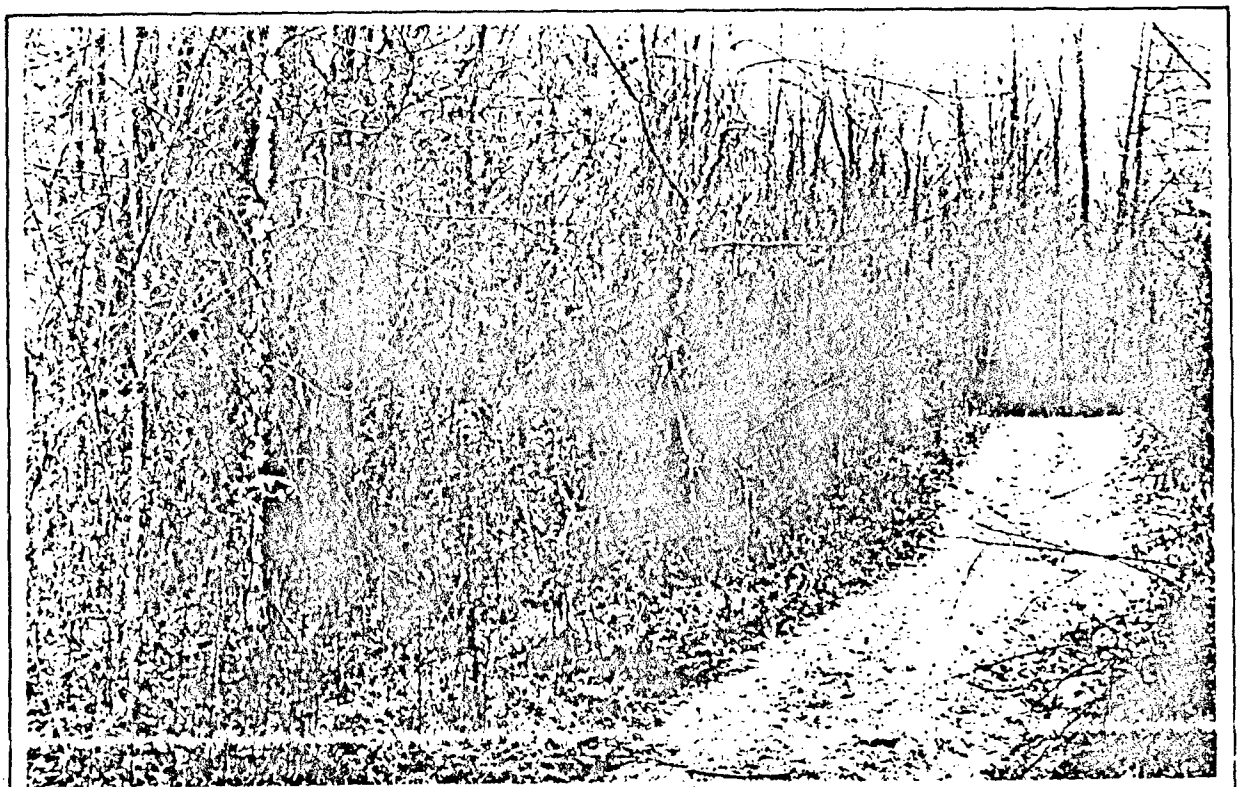


Figure 19
Site 40WK___ (Site 14)
Excavation Units, January 1987 Testing



View to northeast from levee edge looking toward site.

View to southeast from near COE permanent datum, looking toward site.

Figure 20
Site 40WK___ (Site 14)
General Setting, January 1987 Testing.

TENNESSEE

Obion River Survey Project

Twenty six flakes and a number of clay and ferruginous sandstone lumps were recovered in the one meter test unit, almost all in the upper 30 cm of deposits (Appendices I-1, I-3). Three flakes were observed below this depth, although given the massive equipment and root disturbance in the area, these are thought to have been intrusive. No pottery was found in the unit, although one of the clay lumps from the first level may be part of prehistoric baked clay objects. Given the heavy equipment compaction of the local soils, however, this assignment is considered uncertain. No cultural features, beyond the obvious introduced fill in the upper levels, were noted in the unit.

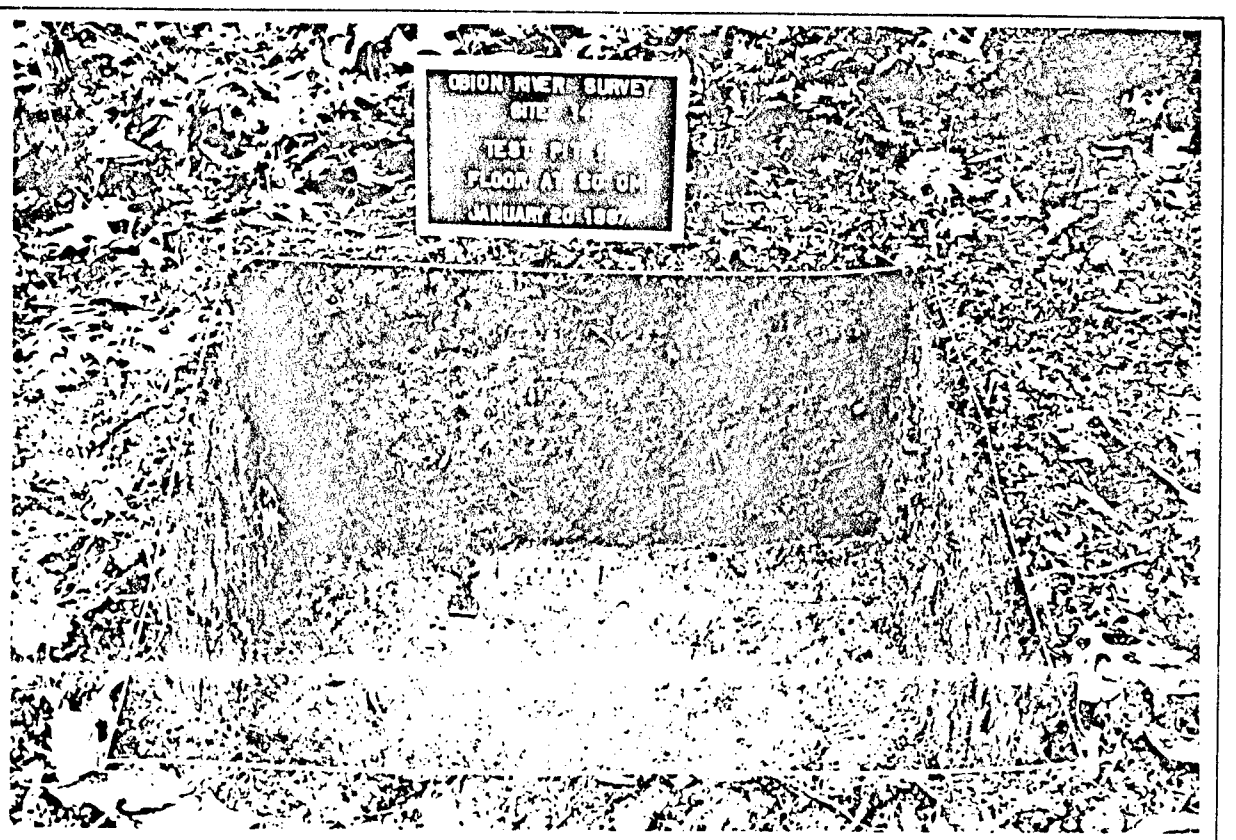
The Site 14 area reflects the remnants of a prehistoric site largely destroyed by construction activity. This site appears to have occupied the point of land where the turnaround is now located. Prior to the construction of the road down to the levee, this area would have been the last high ground on the Beech Ridge terrace overlooking the old channel. A moderately dense prehistoric scatter, of probable Woodland age (given the grog tempered sherds), appears to have originally been present in this area. A minor Late Archaic/Early Woodland component may also be indicated by the presence of possible baked clay object fragments, although these may be associated with the Woodland component. Although the setting is generally similar to the Site 10 area, Site 14 appears to have seen somewhat more extensive use during prehistory.

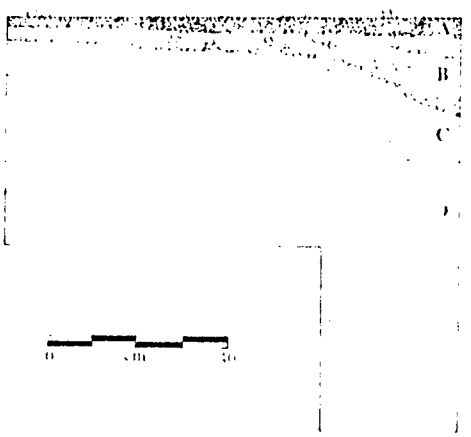
ISOLATED FIND 1

Isolated Find 1 was a possible chert shatter fragment found in a plowed field at the southern end of the survey corridor, on the southwest side of the South Fork of the Obion River (Figure 2). At the time of survey, January 7, 1987, the area was in harvested corn and exhibited close to 100 percent surface visibility. The "artifact" is small, weighing 0.2 grams, and is of doubtful antiquity. Similar appearing small pieces of chert were observed among limestone gravels used to fertilize fields outside the project right-of-way, and it is possible that this fragment was introduced to the field in this fashion. No other prehistoric materials were observed in the vicinity, although Isolated Find 2, a diffuse scatter of recent historic artifacts, occurs from 100 to 200 meters to the southeast.

ISOLATED FIND 2

Isolated Find 2 encompassed a number of recent historic artifacts scattered over an appreciable area in a plowed field located at the southern end of the survey corridor, on the southwest side of the South Fork of the Obion River (Figure 2). At the time of survey, January 7, 1987, the area was in harvested





A Humus, leaves and fine roots. Silt loam
10YR3/3 10YR4/1

B Disturbed, mottled zone (pushed in by bull dozer)
Silt loam. Contact with C indistinct
10YR3/3 or 10YR5/2

C Old A zone? Roots follow base of C-D contact
Silt loam. Contact with D fairly well defined
10YR5/3

D B horizon. Silt loam. Fairly uniform in color and texture to 90 cm. 10YR6/6

Soil Core (7.6 cm diameter) Stratigraphy
Core removed 50 cm southeast of Test Unit 1

Horizon	Depth	Color	Mottling	Texture	Remarks
A	0-3	10YR3/2	none	Silt loam	Non-calcareous
E	3-28	10YR4/3	none	Silt loam	Non-calcareous
Bt1	28-60	10YR4/4 7.5YR4/4	fff 10YR5/3	Silt loam	Non-calcareous, mottles in lower portion
Bt2	60-90	10YR4/4 7.5YR4/4	c2d 7.5YR5/8	Silt loam	Non-calcareous
Bx	90-130	7.5YR4/4	m2d 10YR6/3 7.5YR5/8	Silt loam	Non-calcareous, gray coatings, Mn coatings
C	130-160	7.5YR4/6	m2d 7.5YR5/8 10YR6/2	Silt loam	Non-calcareous, some fragipan characteristics

Note: On north facing slope, moderately well drained soil seepage was noted after augering, thus indicating significant lateral flow above the fragipan. Nominal development of the argillic (28-90 cm) was noted.

Figure 21
Site 40WK___ (Site 14)
Test Unit 1 Stratigraphy (North Wall),
January 1987 Testing.

corn and exhibited close to 100 percent surface visibility. Twelve historic artifacts were collected over an area approximately 100 meters in diameter, none grouped in close enough proximity to warrant consideration as a site. These artifacts dated primarily to the second quarter of the twentieth century, and included a number of table service fragments, one tile fragment, and one piece of window glass, suggesting a domestic structure (Appendix I-4; Figure 23x,y,aa,bb). The scatter was extremely diffuse, however, and no other evidence for architectural remains, such as brick fragments, were observed. Intensive examination of the area, including excavation of a shovel test, failed to detect evidence for a structure, although it is possible one was present in the area and was dismantled. No buildings are indicated on existing aerial photographs or twentieth century U.S.G.S. maps of the area. Isolated Find 1, a chert shatter fragment, was located 100 meters northwest of this scatter.

SUMMARY

Three sites and two isolated finds were found in the project direct impact area, which extended, for the most part, through old backswamp areas adjacent to the channelized course of segments of the Middle and South Forks of the Obion River. No sites, and only two isolated finds, were located in the level, lower lying areas characterizing much of the survey corridor. The three sites that were located near the channel were on an older, elevated land surface, Beech Ridge, that had been bisected by the Middle Fork of the Obion River. Although much of the study area is under cultivation at the present, this farming has been made possible by twentieth century channelization and drainage projects. Prior to the present century, the study area appears to have seen little extended use. Prior to drainage and land clearing, the primary use of the project study area was probably historic and prehistoric hunting, fishing, and gathering activity.

VII. SITES OUTSIDE THE PROJECT IMPACT AREA

INTRODUCTION

A total of 16 sites and four isolated finds were found just outside the project right-of-way, at distances up to approximately two kilometers from the river channel. These included nine previously recorded sites, which were re-examined to see if they extended into the project impact zone. The reexamination of known sites in the general vicinity of the study area, and the recording of new sites, was conducted with the permission and support of Mr. Douglas Prescott, the Contracting Officer's Representative. Each of these sites and assemblages is briefly described below; detailed artifactual information is provided in Appendix I. The current summaries include a discussion and evaluation of information from previous investigations, where this was available. Completed forms for all of these sites have been submitted to the Tennessee Department of Conservation's Division of Archaeology, Nashville.

SITE1 and 1A (40GB42?)

Site 1 was a prehistoric site discovered on January 7, 1987, during an attempt to relocate three previously recorded sites, 40GB42, 40GB53, and 40GB61, that were plotted close to the right-of-way in the state site records. The sites are located on the west side of the South Fork of the Obion River, just below the confluence with the Middle Fork (Figure 2). Although plotted on the 7.5' Quadrangle for the area, the precise location of these three sites was uncertain, since the field and wood lots shown on the 1954 map do not correspond to present conditions. Because these sites, particularly 40GB42, had apparently produced major assemblages (see below), their relocation was thought critical to the present study. Intensive, systematic shovel testing in the woods in this general area, plus the careful inspection of plowed fields, resulted in the discovery of three sites, designated Sites 1, 2, and 3. While these may be the three previously recorded sites, their locations are somewhat different. As such, they retain a separate designation. Attribution of these sites to one of the three previously recorded sites is based on their relative position with respect to each other, which generally conforms to that on the map in the state site files.

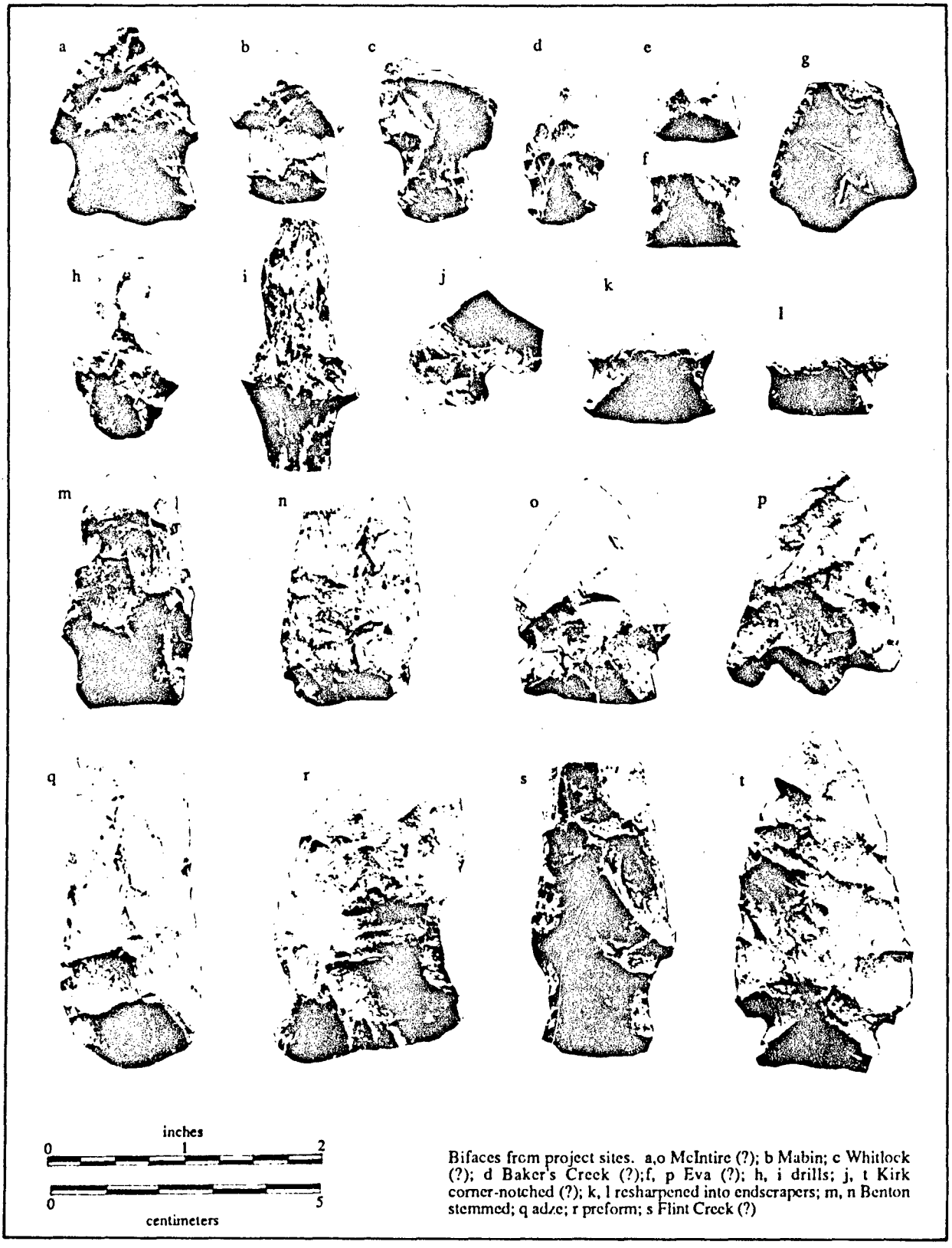
At the time of survey, Site 1 was in a small, cultivated field located approximately 400 meters south of the present, channelized course of the Obion. From inspection of the U.S.G.S. quad, and the ground surface in the area, it is apparent that the original channel was much closer, approximately 100 meters to the north. The site area was in harvested corn, offering 80 percent surface visibility. Artifacts were observed over an area approximately 100 by 40 meters in extent. A complete, general surface collection of all

visible artifacts was made (total collecting time, approximately two person hours). Most of the materials came from the central part of the field, from an area roughly 60 by 30 meters in extent. A smaller (20 meter diameter) cluster of predominantly cobble fragments was observed at the north end of the scatter that was collected separately as Site IA, a separate provenience within the Site 1 scatter. No subsurface testing was undertaken.

In all, 55 prehistoric artifacts were collected, 48 from the main scatter and seven from the northern cluster (Appendices I-1, I-2, I-3). The artifacts recovered included two sherds, two projectile points from the main scatter (Figure 22a,b), a number of utilized core/tools (e. g., Figure 24d), a moderate quantity of utilized and unmodified debitage, and a battered pestle fragment (Figure 24f). The sherds were grog tempered, and one exhibited fabric impressions. Although probably Withers Fabric Marked, Robert Mainfort (personal communication) noted that the dowel impressions are thinner than is typical on this ware. The hafted bifaces are not particularly diagnostic, although they may represent McIntire and/or Mabin types. Light, predominantly Late Archaic to Woodland site use is suggested by the surface materials recovered.

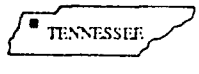
Site 1 may be 40GB42, which was recorded by Gerald P. Smith of Memphis State University in 1973. Unfortunately, the state site file form in Nashville contains only locational coordinates, and that the site is a "camp" and "village", with Late Archaic and Late Woodland components present. Smith (1979a:20-21) has provided a more detailed description of this site:

> Gb42 is a deep stratified site with midden approximating 1.2 meters (4 feet) in depth near the center and occupations ranging in time from Early Archaic through Mississippian. Bone preservation is excellent below the Late Archaic Benton stratum and affords the only known opportunity in West Tennessee outside the Tennessee River valley for study of human physical remains and paleozoology during the 6000 B.C. - 3000 B.C. time span. Two 1-meter x 2-meter test pits were dug at the site during the summer of 1973; five burials and numerous cultural remains were recovered in the excavations. The Mississippian occupation is confined to the upper few inches and would have been destroyed had the site ever been cultivated; major occupations are, in order from most recent to earliest, Baytown, Tchula; Poverty Point; Benton; and Early Archaic, including Big Sandy and Palmer. The test work carried out here serves notice that, given the heavy flood plain siltation of recent decades, many of the seemingly small midden rises far out in river flood plains are likely to be only the protuding tips of deep sites with earlier deposits sheltered under a mantle of silt and should be approached with great caution until the true state of affairs can be established (Smith 1979a:20-21).



Bifaces from project sites. a,o McIntire (?); b Mabin; c Whitlock (?); d Baker's Creek (?);f, p Eva (?); h, i drills; j, t Kirk corner-notched (?); k, l resharpened into endscrapers; m, n Benton stemmed; q adze; r preform; s Flint Creek (?)

Figure 22
Hafted Bifaces.



Twenty three baked clay object fragments were reportedly found at the site, including the following forms: five spherical, six biconical, one ellipsoidal with cane punctations, one biscuit shaped with with no decoration, five biscuit shaped with cane punctations, one biscuit shaped with fingertip impressions, and one plain cube shaped. In addition, 41 sherds are described, including 23 Tchefuncte types (3 cordmarked, 8 fabric impressed, 10 plain, and 2 Tammany Punctated), 10 "Thomas" types (3 cordmarked, 6 fabric impressed, and 1 plain), and 8 "Baldwin" types (4 cordmarked, 1 fabric impressed, and 3 plain) (Smith 1979a:87,93).

Needless to say, Smith's description indicates a much richer assemblage than that found in the present investigations, although it should be noted that his work included deep testing. For this reason, and because of the general nature of the reported site location, it is possible he was working at another location. The Site 1 scatter, it should be noted, is plotted on project aerials (see Appendix IV), which will permit its relocation should future investigators try to resolve this discrepancy.

SITE 2 (40GB61?)

Site 2 was one of three sites discovered on January 7, 1987, during an attempt to relocate previously recorded sites along the west side of the South Fork of the Obion River, just below its confluence with the Middle Fork (see Site 1 discussion). Its location approximately corresponds to that of site40GB53, which was recorded by Gerald P. Smith of Memphis State University, apparently in 1973 or 1974. Unfortunately, the state site file form in Nashville contains only locational coordinates, with no data on the kind of materials observed or collected.

At the time of the 1987 survey, the Site 2 area was in harvested corn, offering approximately 80 percent surface visibility. The site is located about 350 meters west of Site 1, and about the same distance south of the channelized course of the Obion. Prior to channelization, its location was much closer to the river; the old bed lies approximately 100 meters to the north. A general collection was made of all observed artifacts (total collecting time, approximately 30 person/minutes). Most of the materials came from near the edge of the field, from an area approximately 20 meters in diameter. A single isolated projectile point base, possibly a Motley or Whitlock (Figure 22c), was found about 40 meters west of this scatter, near a large tree at the edge of the field. Only eleven artifacts were found, of which ten were prehistoric (Appendices I-1, I-2, I-4); the single historic artifact was an unidentifiable piece of iron. Other artifacts collected included a large metavolcanic grinding basin (Figure 24n), several flakes and flake tools, and three pieces of ferruginous sandstone, one with a possible abrader facet. The site is tentatively interpreted as Late Archaic or Woodland in age, based on the point,

and the absence of ceramics. Its exact location is plotted on the project aerial photographs, which should facilitate relocation. Because the precise location of Smith's site 40GB53 could not be determined, Site 2 collections were recorded separately.

SITE 3 (40GB53?)

Site 3 was one of three sites discovered on January 7, 1987, during an attempt to relocate previously recorded sites along the west side of the South Fork of the Obion River, just below its confluence with the Middle Fork (see Site 1 discussion). Its location approximately corresponds to that of site 40GB53, which was recorded by Gerald P. Smith of Memphis State University some time prior to 1975. Unfortunately, the state site form in Nashville contains only locational coordinates, and that the site is a "camp" with Archaic components present. No other information is presently available about this site.

At the time of the 1987 survey, the Site 3 area was in harvested corn, offering approximately 80 percent surface visibility. The site is located about 100 meters west of Site 1, and about two hundred meters east of Site 2 in the same field. A general collection was made of all observed artifacts (total collecting time, approximately 30 person/minutes). Only eight prehistoric artifacts were found, all near the edge of the field, in an area approximately 20 meters in diameter. No diagnostic materials were found, although given the absence of ceramics, it is possible that a preceramic component is represented. Its location is plotted on the project aerial photographs. Because the precise location of Smith's site 40GB53 could not be determined, the Site 3 collections were recorded separately.

SITE 5 AND 5A

Site 5 was a prehistoric and historic artifact scatter found on January 9, 1987, in a plowed field approximately 200 meters south of the Middle Fork of the Obion River. The site area is on the elevated Beech Ridge land surface, approximately two kilometers east of the confluence of the Middle and South Forks (Figure 2). Site 4, which was intensively examined during this project, is located approximately 250 meters to the northeast. At the time of survey the Site 5 area was in fallow, harvested soybeans, offering between 50 and 75 percent surface visibility. Artifacts were observed on low rises near the edge of the field, in an area approximately 100 (N/S) by 50 (E/W) meters. Two concentrations were observed, corresponding to the northern and southern half of the scatter; these subareas were designated 5 and 5A, respectively. Although the entire site was on the elevated land surface, the southern concentration was on a slightly higher rise. Beyond the edge of the field the

ground surface dropped appreciably; the old natural channel of the Middle Fork lay to the north, midway between the field edge and the modern channel.

A general surface collection was made over the site area, with material from the two concentrations provenienced separately (total collection time, approximately 1.5 person hours). In general, the southern concentration tended to be dominated by prehistoric artifacts, while the northern concentration included both prehistoric artifacts and early twentieth century historic artifacts (Appendices I-1, I-3, I-4). Only a small number of artifacts (N=26; 8 historic, 18 prehistoric) were found, indicating a fairly low density. The only diagnostic prehistoric artifact was a single, unidentifiable grog tempered sherd, suggesting a Woodland component. The remainder of the prehistoric assemblage included several flake and cobble tools, including one "nutting" stone (e. g., Figure 24h). The historic artifacts collected may point to a dismembered structure, although none are shown on the 1954 U.S.G.S. Quadrangle covering this area, or on the project aerials.

SITE 6

Site 6 was a scatter of prehistoric artifacts located on the crest of a small, pronounced knoll about 350 meters south of the channelized course of the Middle Fork of the Obion River (Figure 2). The site is at the edge of the elevated upland land surface that begins about two kilometers east of the confluence of the Middle and South Forks. The site, which was found on January 9, 1987, is approximately 250 meters southeast of Site 5, in the same field. At the time of survey the area was in harvested corn, offering between 75 and 100 percent surface visibility. A light scatter of nine prehistoric artifacts (Appendices I-1, I-2, I-3) was found in an area approximately 15 meters in diameter, at the crest of the knoll defining the site. Three grog tempered sherds were present, including one with parallel cord impressions that may be Mulberry Creek Cord Marked. A hafted biface fragment was also found that is either the stem of a larger point, or the base of a crude triangular point (Figure 22e). Use of the area during the Woodland is indicated, although the possibility of other components cannot be ruled out.

SITE 7

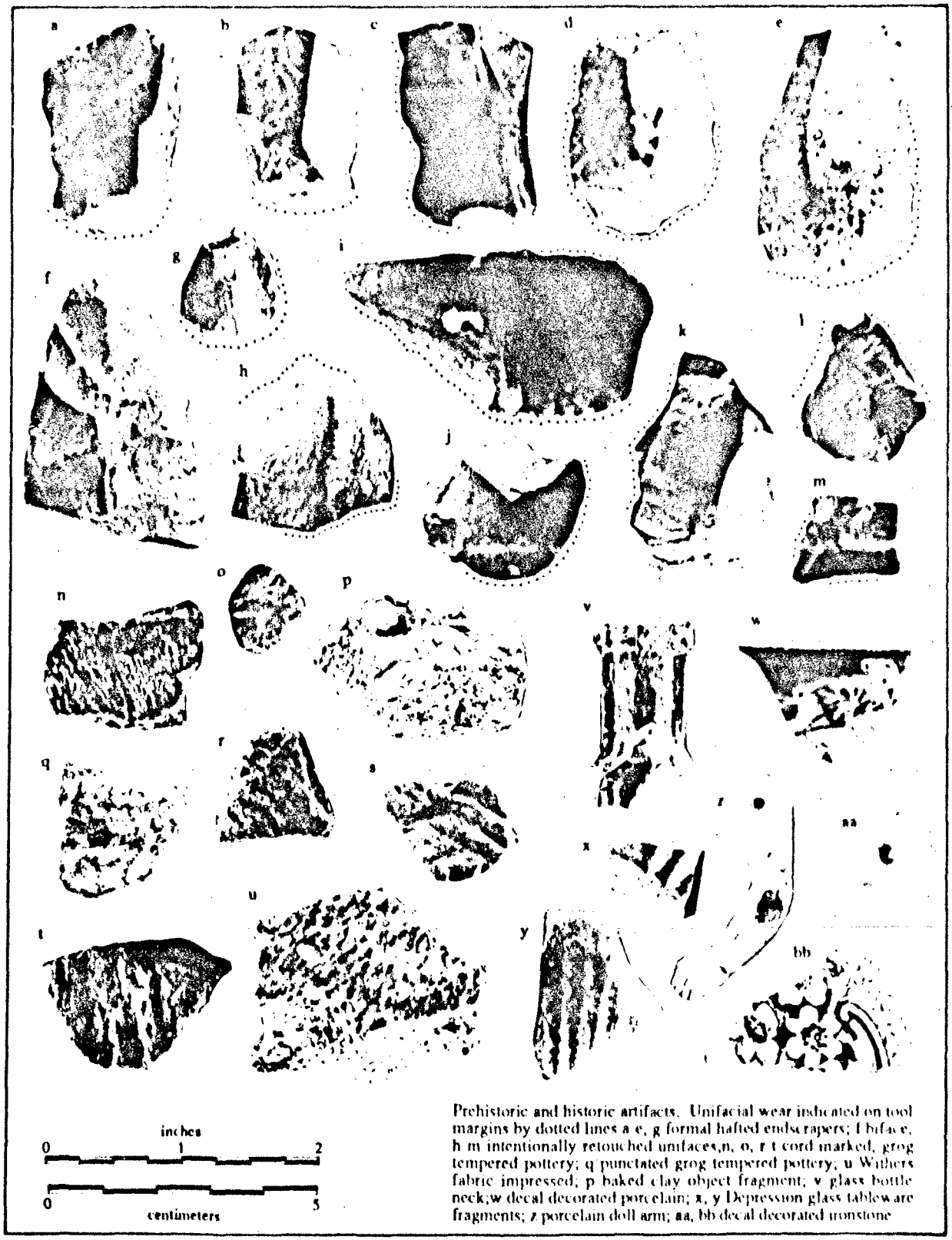
Site 7, which was found on January 9, 1987, was a dense concentration of historic artifacts from a former house site, together with a much lighter scatter of prehistoric artifacts, located approximately 500 meters southeast of the channelized Middle Fork of the Obion River (Figure 2). The site, which extends over an area approximately 75 meters in diameter, is on a low rise at the edge of the elevated upland land surface that begins about two kilometers

east of the confluence of the Middle and South Forks of the Obion. At the time of survey most of the site was in harvested soybeans, with surface visibility approximately 90 percent. An old, lightning blasted tree, rising about 10 meters high, and surrounded by dense weeds, defines the former house site, which was located at the western edge of the field; fragments from a chimney were found in this area. Because of their high incidence, only a small (N=34), intuitive sample of unusual historic artifacts was picked up; all observed prehistoric remains (N=14), which were much less common, were collected (Appendix I).

The historic artifacts included a range of glass, ceramic, iron, and other domestic debris (Appendix I-4; Figure 23v,z). All of the materials date to the last third of the nineteenth century and the early part of the twentieth century. This is in agreement with a comment by a local landowner, who had noted (when asked for permission to survey on their land) that her grandparents had lived in a house in this general area around the turn of the century. The prehistoric assemblage included several unusual artifacts, including a cane punctated baked clay ball fragment (Figure 23p), and three grog tempered sherds, one plain, one unidentifiable, and the third stamped or punctated (Figure 24q). A Woodland component is suggested by the pottery; the baked clay object may date to this period, or to an earlier Late Archaic (Poverty Point) component.

SITE 8

Site 8 was a light scatter of prehistoric artifacts located on a low rise on the western side of Beech Ridge, approximately 600 meters north of the channelized Middle Fork of the Obion River (Figure 2). The confluence of the Middle and South Forks of the Obion is located approximately 1.3 kilometers to the southwest. At the time of survey, January 12, 1987, the site was in harvested corn, offering approximately 75 percent surface visibility. Artifacts were found in an area roughly 30 meters in diameter, approximately 30 meters northeast of the field edge. Beyond the edge of the field, to the southwest, the ground dropped quickly down to the floodplain of the Obion River. All observed artifacts (N=6; Appendix I) were collected, with the total collection time approximately one person hour. Among the materials recovered was a corner notched hafted biface fragment, possibly part of a Kirk Corner Notched (Figure 22j), and two intentionally retouched hafted chert endscrapers (Figure 23a,b), as well as a single unidentifiable grog tempered sherd, a pestle fragment (Figure 24e), and one chert interior thinning flake. At least two periods of site use, dating to the Early Archaic and the Woodland, are indicated by the assemblage.



Prehistoric and historic artifacts. Unifacial wear indicated on tool margins by dotted lines a e, g formal hafted endscrapers; f biface, h m intentionally retouched unifaces,n, o, r t cord marked, grog tempered pottery; q punctated grog tempered pottery; u Withers fabric impressed; p baked clay object fragment; v glass bottle neck;w decal decorated porcelain; x, y Depression glass tableware fragments; z porcelain doll arm; aa, bb decal decorated ironstone

Figure 23
Unifaces, Prehistoric Ceramics, and Historic Artifacts.

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SITE 9

Site 9 was discovered on January 12, 1987, on the western side of Beech Ridge, approximately 100 meters due east of Site 8. The site area is approximately 600 meters north of the channelized Middle Fork of the Obion River, and the confluence of the Middle and South Forks of the Obion is 1.3 kilometers to the southwest. At the time of survey the site area was in harvested corn, with surface visibility between 25 and 50 percent. The site was roughly 30 meters (N/S) by 20 meters (E/W) in extent, and was on a low rise in the field, approximately 30 meters north of the woods edge. Twenty-six prehistoric artifacts were observed and collected (approximate collection time, one person hour)(Appendix I). Several cobble tools, mostly hammerstone fragments, one core/chopper (Figure 24b), five intentionally or wear retouched chert flakes, and eight pieces of debitage were among the artifacts recovered from the site (Appendix I-1). No diagnostic artifacts were found, although given the absence of ceramics, an Archaic component or components may be suggested. As with a number of other sites found on this landform, cobble tools were fairly common. Some use of these higher areas for plant processing activities may be indicated by this distribution, although this inference needs to be tested further.

SITE 11

Site 11, which was discovered on January 12, 1987, was a dense scatter of historic artifacts, with a few prehistoric artifacts also present, located on the northeastern side of Beech Ridge, approximately 800 meters north of the channelized course of the Middle Fork of the Obion River (Figure 2). The site area is on a rise approximately 200 meters east of a high voltage powerline cutting across the field. Artifacts were observed over an area approximately 75 meters (N/S) by 50 meters (E/W) along the edge of the field. At the time of survey the site area was in harvested corn, offering between 90 and 100 percent surface visibility. Because of the density of the remains, an intuitive sample of unusual historic artifacts was collected, although all prehistoric remains were picked up (total collection time, approximately one person/hour). The historic artifacts that were collected dated to the first half of the twentieth century, and appear to come from a house site (Appendix I-1, I-4). Many of the artifacts observed in the field were burned; some of the glass and ceramics were distorted and blackened. Brick fragments were observed over the area, and it appears a fairly substantial structure was present and burned. No structures are indicated in this general area on the 1954 Rutherford 7.5' U.S.G.S. Quadrangle, however, so the building or buildings that were here were apparently gone by that time. The prehistoric artifacts found, consisting of a single unidentifiable grog tempered sherd, four flakes, and a chunk of ferruginous sandstone, suggest minor Woodland period use of the

area.

SITE12 (40GB48?)

Site 12 was discovered on January 16, 1987, during an attempt to relocate site 40GB48, which had been recorded by Gerald P. Smith of Memphis State University some time prior to 1975. The site area is located on the west side of the South Fork of the Obion River, approximately seven kilometers below the confluence with the Middle Fork (Figure 2). Although plotted on the 7.5' Quadrangle for the area, the precise location of the site was uncertain. The state site form in Nashville contained only locational coordinates, with no data on the kind of materials observed or collected. For this reason it was deemed important to attempt to relocate the site, to see if it extended into the right-of-way. The area where site 40GB48 was plotted on the state quadrangle maps was intensively examined, as was the surrounding terrain all the way to the South Fork of the Obion River, a half a kilometer to the north (total survey time, approximately eight person hours). No evidence for a site was found, beyond a chunk of chert in a piece of field limestone gravel.

Approximately 250 meters southwest of the area where 40GB48 was plotted, a large, dense prehistoric site was found; it is possible that this scatter is the previously recorded 40GB48 area. This scatter was designated Site 12, and all observed artifacts were collected (total collection time, approximately two person hours). At the time of survey the Site 12 area was in low winter wheat, with surface visibility at approximately 25 percent. The site extends for approximately 200 meters (NW/SE) by 50 meters (NE/SW) along the edge of a pronounced terrace demarcating and overlooking the floodplain of the South Fork of the Obion River. The modern, channelized course of the river is approximately 600 meters to the northeast; the old natural channel is approximately 1.5 kilometers to the northeast.

Although surface visibility was comparatively poor, a large number of artifacts were collected (N=138; Appendix I). Six historic artifacts were found, probably dating from the first half of the twentieth century, although no evidence for structures was observed (Appendix I-4). Prehistoric artifacts, the vast majority of the assemblage, included a possible Eva point (Figure 22g; Appendix I-2); nine cobble tools, including two nutting stones (e.g., Figure 24g), two abraders, and five hammerstone fragments; 18 grog tempered sherds, including cord marked, plain, fabric impressed, and possibly punctated finishes; 24 baked clay object fragments, including six with hollow cane punctations; seven biface fragments; ten wear or intentionally retouched flake tools; 25 pieces of unmodified debitage; and just over a kilogram of ferruginous sandstone and rock fragments (Appendix I-1). A Middle Archaic component is suggested by the possible Eva point, while the grog tempered cord and fabric impressed sherds indicate probable Early/Middle Woodland

period site use. The baked clay object fragments also probably date to this period, although they may also indicate a preceramic, Late Archaic/Poverty Point period occupation.

SITE 13

Site 13 was discovered on January 16, 1987, during the attempt to relocate site 40GB40. Site 13 is located on the west side of the South Fork of the Obion River, approximately seven kilometers below the confluence with the Middle Fork (Figure 2). The modern, channelized course of the river is approximately 800 meters to the northeast. The site was a light scatter of historic and prehistoric artifacts approximately 30 meters in diameter located along the edge of a pronounced terrace demarcating and overlooking the floodplain of the South Fork of the Obion River. Site 12 is on this same landform approximately 300 meters to the southeast, and a modern, occupied house is located just to the west. At the time of survey the Site 13 area was in harvested corn, with surface visibility approximately 75 percent. All prehistoric artifacts, and an intuitive sample of historic debris was collected (total collection time, approximately 0.5 person hours). The historic artifacts recovered dated to the first half of the twentieth century, and may come from the nearby household (Appendix I-4). The three prehistoric artifacts collected included one wear retouched chert flake, and two small grog tempered sherds, one plain and the other check stamped or punctated (Appendix I-1, I-3), suggesting Woodland period site use.

SITE 40GB41

Site 40GB41 was originally recorded by Gerald P. Smith of Memphis State University, apparently in early 1973. The state site file form in Nashville contains only locational coordinates, and that the site is a "camp" and "village", with Late Archaic, and Late Woodland components present. Smith (1979a:20) contains a more detailed description of this site:

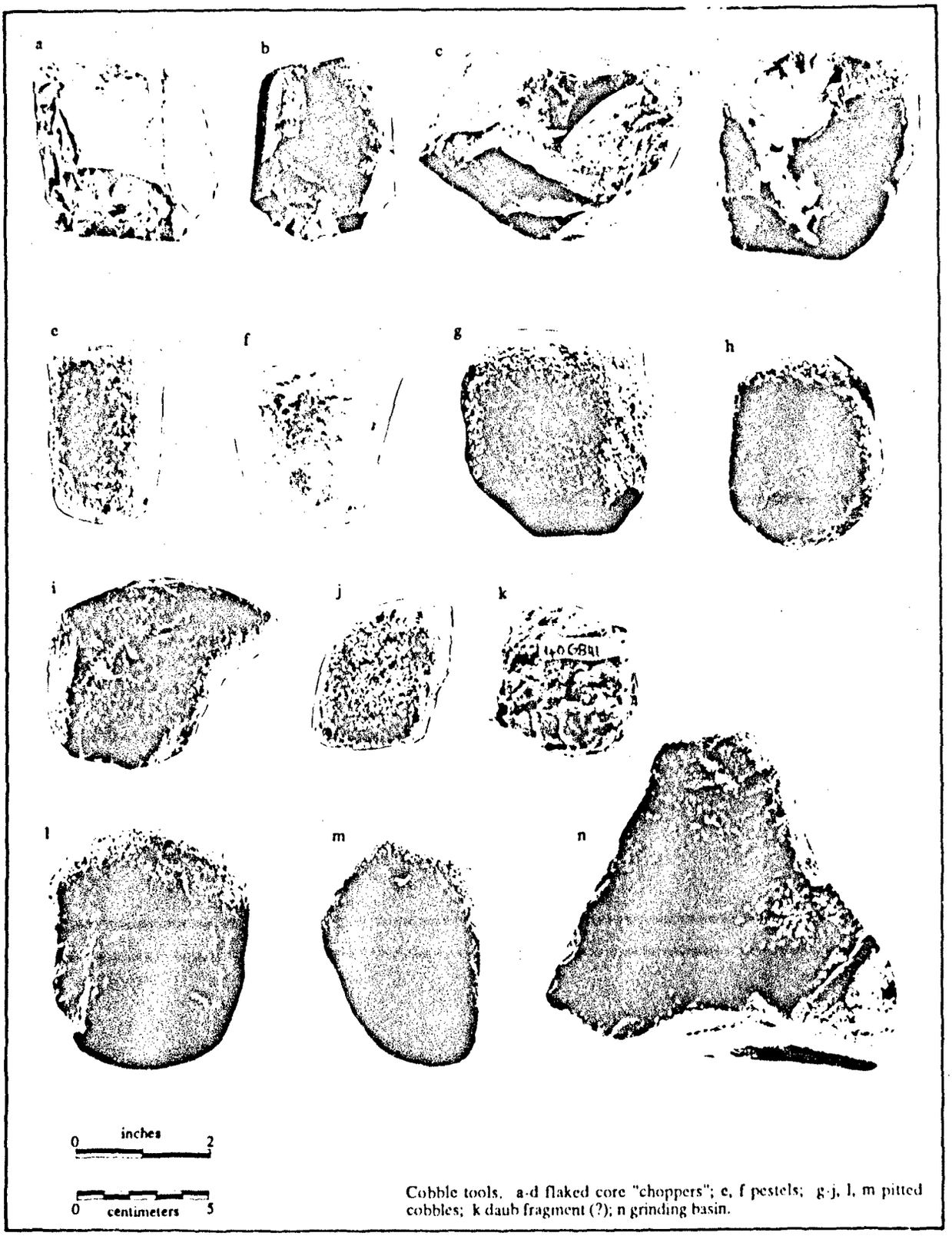
> Gb 41 occupies a low rise in the Obion flood plain near the former natural channel. The site has heavy midden stain with a minimum depth of 1.5 feet, according to a local informant. The owner halted all investigation after test work began on Gb42 and commenced deep plowing of the site to recover the valuable artifacts he was sure must be buried there and that he should not let others carry off. Mussel shell and bone were visible on the surface, suggesting stratigraphy similar to Gb42. The owner is not known to have access to a chisel plow or other implement capable of penetrating more than about two feet, so any early

deposits should still be intact and important. Since the silt mantle on Gb 42 approximates three feet in depth, such deposits should be considered probable below the central part of the site until proven otherwise. The surface collection obtained in early 1973 indicates primarily hunting activity in the upper stratum; materials collected include: 2 projectile point fragments (1 Pickwick, 1 unidentifiable); 1 scraper, made on the basal portion of a Benton point; 8 potsherds (6 Tchula, 2 Lauderdale); 7 Poverty Point objects; 1 hammerstone; 5 cores; 18 flakes/chipping shatter; 13 grindstones; and 10 sandstone fragments (Smith 1979a:20-21).

Four identifiable baked clay object fragments were reportedly found at the site, including the following forms: one plain biconical, one plain ellipsoidal, one ellipsoidal with cane punctations, and one biscuit shaped with fingertip impressions. In addition, eight sherds are described, including six Tchefuncte types (2 cordmarked, 4 plain) and two "Thomas" types (both plain) (Smith 1979a:87,93).

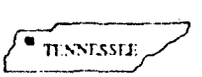
Site 40GB41 was revisited on January 7, 1987 by the present investigators. At the time of survey the site area was in harvested corn, with surface visibility from 50 to 75 percent. Artifacts were observed over an area approximately 50 meters in diameter; a general surface collection of all visible artifacts was made (total collection time, approximately four person hours). The site is located on a slight rise 200 meters south of the channelized course of the South Fork of the Obion River. At the time of survey most of the area around the site was flooded; a goose blind was located 75 meters to the southeast. The site area was characterized by a rich, dark blackish brown (10YR3/3) silt, presumably organic midden staining, that was the darkest soil observed in plowed portions of the right-of-way. A single shovel test opened and screened in the center of the scatter indicated that the deposits were at least 50 cm deep, and that materials were present below the base of the modern plowzone. Shell, bone, and charcoal fragments were observed on the surface and in the shovel test fill, documenting the presence of well preserved paleosubsistence information at the site.

The prehistoric surface assemblage recovered from 40GB41 in 1987 included an appreciable range of hafted bifaces, biface fragments, pottery, cobble tools, wear and intentionally retouched unifacial flakes, unmodified debitage, fired clay, ferruginous sandstone, and cracked rock, as well as pieces of bone, shell, and charcoal (Appendices I-1, I-2, I-3). Hafted bifaces included both Late Archaic and Woodland forms, including two points that had been reworked, one into a drill and the other into an endscraper (Figure 22d,i,l,s; Appendix I-2). The ceramics included 19 grog tempered sherds, including cord marked, fabric impressed, plain, and unidentifiable surface finishes (Figure 23r,t,u; Appendix I-3). Four of the fabric impressed sherds, characterized by



Cobble tools. a-d flaked core "choppers"; e, f pestels; g-j, l, m pitted cobbles; k daub fragment (?); n grinding basin.

Figure 24
Cobble Tools.



Obion River Survey Project

narrow dowel impressions and moderate quantities of fine sand in the paste, may be Withers Fabric Impressed, var. Twin Lakes (Phillips 1970:175; Robert Mainfort: personal communication 1987). The cord marked material resembles Mulberry Creek Cord Marked; due to a slight incidence of fine sand in the paste it may belong to vars. Thomas or Tishomingo (Robert Mainfort: personal communication 1987). Other ceramic artifacts recovered included a lump of what appears to be fired clay daub (Figure 24k), suggesting the presence of structures on the site, and ten probable baked clay ball fragments, one with hollow cane punctations. Two recent historic glass fragments were also found (Appendix I-4), although no evidence for structures was noted, aside from the nearby hunting blind.

Site 40GB41 contains extensive, well preserved prehistoric components dating to the Late Archaic and Early/Middle Woodland periods, with other occupations possibly present as well. Because of its importance, and proximity to the right-of-way, extreme care must be taken to avoid it during construction activity.

SITE 40WK9

Site 40WK9 was recorded by Gerald P. Smith of Memphis State University, and Tommy Adams, a local informant from Kenton, Tennessee, on April 29, 1973. The state site file form in Nashville contains locational coordinates, and indicates that the site is a "camp/village" with Late Archaic and Poverty Point components present. At the time of the original survey, the site was reported "under cultivation," with "moderate erosion" evident. A pronounced midden stain 300 feet in diameter was noted, with the following note: "pits reported in profile of trench silo at South edge of site in hog pen." Smith (1979a:21-22) also published a detailed description of this site:

> Wk 9 is a large hunting and gathering camp approximating 300 ft. in diameter on the crest of the first terrace of the Obion. The surface shows pronounced midden staining and pits up to three feet in diameter and three feet deep were visible in 1973 in the side of a trench silo cut through the edge of the site. Late Archaic and Poverty Point occupations are present on the site. Of particular importance is the presence of Tennessee River Late Archaic and Early Woodland point types which should be roughly contemporary with the Poverty Point occupation. Materials recovered in 1973 include: 14 projectile points and fragments (1 Benton, 1 Pickwick, [1 Lick Creek, 1 Arlington, 1 McIntire,] and 9 unidentifiable; 1 scraper; 1 potsherd; 8 Poverty Point objects; 2 hammerstones; 7 cores; 45 flakes/chipping shatter; 12 utilized flakes; 1 hoe fragment; 6 grindstones; and 18 sandstone fragments (Smith 1979a:20-21; type designations in brackets

provided by Robert Mainfort, replacing Smith's undefined type numbers).

The area on the 1954 Rutherford 7.5' U.S.G.S. Quadrangle where 40WK9 was plotted in the state files was revisited on three occasions during the 1987 survey, on January 6, 11, and 13. The site area is located on the edge of the elevated uplands, approximately 600 meters northwest of the old natural channel of the South Fork of the Obion River, and 1000 meters north of the channelized course (Figure 2).

At the time of survey the site area was in harvested soybeans, with surface visibility between 90 and 100 percent. Artifacts were collected from an area approximately 50 meters in diameter at the edge of the terrace, just before it dropped off to the floodplain (total collection time, one person hour). Site 40WK10 was located immediately to the south. The two sites actually form a continuous scatter, although a marked decrease in artifact density occurs between the edges of the two main concentrations, which are separated by about 30 meters.

A moderate number of prehistoric artifacts (N=36) were collected from the 40WK9 area, although unfortunately no unambiguous temporal diagnostics were in the sample (Appendix I-1). A single, possibly grog tempered lump of fired clay was found; while this may be an eroded sherd or from a clay ball, its condition does not warrant use as a diagnostic. Other artifacts recovered from the site included cobble tool fragments (e.g., Figure 24j), wear and intentionally retouched flake tools, unmodified debitage, and several pieces of ferruginous sandstone and cracked rock (Appendix I-1).

It is difficult to evaluate what was found in 1987 with Smith's description of the site as it was in 1974. No midden or feature staining was observed in 1987, nor were any traces of historic structures found in the immediate area (although they were detected on Site 40WK10, to the north). Possibly Smith's description of site 40WK9 refers to a site located elsewhere. Alternatively, what he called 40WK9 may encompass some or all of our 40WK9 and 40WK10 scatters, which would include areas where historic structures were once located. If the area we visited is indeed the same as Smith's 40WK9, then a tremendous amount of site erosion and destruction has occurred since his original visit.

SITE 40WK10

Site 40WK10 was originally reported by Gerald P. Smith and Tommy Adams on April 29, 1973. In the state site files, 40WK10 is described as a "camp" with Early and Late Archaic components present. The site area was estimated to be approximately 300 ft NE/SW by 50 ft NW/SE, and was described as under

cultivation, with severe erosion evident. Locational coordinates were included on the form, together with the notation that it was on the top of a "ridge overlooking [the] S. Fork Obion River."

The area on the 1954 Rutherford 7.5' U.S.G.S. Quadrangle where 40WK10 was plotted in the state files was revisited on three occasions during the 1987 survey, on January 6, 11, and 13. The site area is located near the edge of the elevated uplands, approximately 750 meters northwest of the old natural channel of the South Fork of the Obion River, and 1200 meters north of the modern channelized course (Figure 2). At the time of survey the site area was in harvested soybeans, with surface visibility between 90 and 100 percent. A moderately heavy scatter of prehistoric artifacts was observed over an approximately 100 meter (NE/SW) by 50 meter (NW/SE) area, both along the rest of a low rise in the field, and in an adjoining gully. A small scatter of artifacts, including some modern historic artifacts, were observed on the opposite side of this gully, near a large tree; these materials were provenienced separately as Site 10A. On the 1954 Rutherford 7.5' U.S.G.S. Quadrangle, a house was shown just to the east of this area, and the gully was a dammed farm pond. The disappearance of these features in recent years undoubtedly accounts for the differences between Smith's 1974 description of this general area, and what was seen in 1987 (see Site 40WK9 discussion above).

A moderately dense artifact scatter was observed over the Site 40WK10 area, and a general collection was made of all visible artifacts. Comparatively few historic artifacts were observed, all in the Site 10A area, or well to the northwest of the Site 10 general scatter, where a temporary farm building was recorded on the 1954 U.S.G.S. quadrangle map of the area. These structures have since been removed. The total time spent in collection and recording at the site was approximately six person hours.

The prehistoric surface assemblage recovered from 40WK10 in 1987 included an appreciable range of hafted bifaces, biface fragments, pottery, cobble tools, wear and intentionally retouched unifacial flakes, unmodified debitage, fired clay, ferruginous sandstone, and cracked rock (Appendices I-1, I-2, I-3). One wire nail fragment was also collected from Site 10A; recent historic artifacts from the vicinity of the two buildings shown on the quadrangle map were not collected. Hafted bifaces found on the surface included Kirk, Eva, and Benton types (Figure 22m,n,p,t; Appendix I-2), indicating Early and Middle Archaic components, as well as a possible Late Archaic McIntire or related type (Figure 22o). Comparatively extensive Early Archaic site use is indicated by the presence of a flaked adze or celt (Figure 22q), and a number of formal hafted endscrapers and intentionally retouched flake tools (Figure 23c-e,g,i,l). A possible early point was also found that had been resharpened into an endscraper (Figure 22k); another possible early artifact was a cobble core/chopper (Figure 24a).

Prehistoric ceramics found on the site included grog tempered plain, cord marked, fabric impressed, and unidentifiable finishes (Figure 22s; Appendix I-3). Some of the cord marked pottery had trace amounts of fine sand in the paste, and resembled Furrs Cord Marked, or Mulberry Creek Cord Marked, var. Tishomingo; the vast majority of the ceramic assemblage looks like classic west Tennessee Early/Middle Woodland (Robert Mainfort, personal communication 1987). The fabric impressed sherds were characterized by fairly coarse lumps of grog, considerably larger than that observed in the cord marked material; this ware is undoubtedly Withers Fabric Marked, possibly var. Twin Lakes. One of the unidentifiable sherds looks as though it was shell tempered, suggesting a possible late prehistoric, Mississippian component.

Although 40WK9 and 40WK10 have apparently been extensively disturbed and eroded since Smith's 1974 visit, these sites appear to have components spanning much of the prehistoric era. If intact, stratified deposits could be found, particularly at 40WK10, they would warrant extensive excavation. Minimally, care should be taken to avoid these areas during construction activity.

SITE 40WK11

Site 40WK11 was initially reported by Gerald P. Smith and Tommy Adams, who apparently visited it on May 20, 1974. On the state site form, the site is described as occurring on a "high rise on [the] edge of Beech Ridge in [the] Middle Fork Obion River bottom." At the time of the visit, the site was in heavy weeds and crop stubble, with moderate erosion evident. The extent of the scatter was placed at 200 by 100 feet. Because of the heavy ground cover, Smith recommended revisitation, to ensure an adequate surface collection from the site.

The area on the 1954 Rutherford 7.5' U.S.G.S. Quadrangle where 40WK11 was plotted in the state files was revisited on January 17, 1987. The area is located on a knoll on the western side of Beech Ridge, approximately 600 meters east of the channelized course of the Obion River (Figure 2). At the time of survey the site area was in harvested corn, offering approximately 50 percent surface visibility. A light scatter of prehistoric and historic artifacts was observed over an approximately 100 meter (E/W) by 50 meter (N/S) area along the edge of the field (total collection time, approximately one person hour). A number of cobble tools were found, including a pitted "nutting" stone and a large core/chopper (Figure 24c,l), as well as a small amount of debitage and a nondiagnostic biface fragment (Appendix I-1). Six historic artifacts, all dating from the first half of the twentieth century, were also found (Appendix I-4). A temporary structure is shown in this general area on the 1954 Rutherford 7.5' U.S.G.S. Quadrangle, and the debris is probably from use of this building. Although the artifacts suggest a domestic context, due to the low

density of the scatter, the structure is thought to have been a farm outbuilding of some kind.

SITE 40WK14

Site 40WK14 was first recorded by Gerald P. Smith, who visited it on May 20, 1974. The state site files include locational data, but no information on the kinds of components present. The site is described as located on the edge of Beech Ridge, on the first terrace of the Middle Fork of the Obion River. At the time of the original survey, the site area had been recently plowed, but due to a lack of rain, surface visibility was poor. Moderate sheet erosion was also reported, and Smith recommended revisitation to ensure an adequate collection.

The area on the 1954 Rutherford 7.5' U.S.G.S. Quadrangle where 40WK14 was plotted in the state files was revisited on January 12, 1987. This area is located on a knoll on the eastern side of Beech Ridge, approximately 800 meters north of the channelized course of the Middle Fork of the Obion River (Figure 2). A light scatter of historic debris approximately 50 meters in diameter was observed on a knoll at the edge of the field, together with a few prehistoric artifacts (Appendix I-1, I-4). At the time of survey the field defining the scatter was in harvested corn, offering approximately 50 percent surface visibility. All observed materials were collected (total collection time, approximately one person hour). The historic artifacts recovered (N=32), upon analysis, dated from the middle part of the nineteenth to the early twentieth century, and reflect domestic debris from a former house site (Appendix I-4; Figure 23w). No other evidence for a structure was observed, in the field or in the adjoining wooded area. The apparent prehistoric artifacts (N=2) that were found, a sandstone primary decortication flake and a lump of unmodified ferruginous sandstone, suggest minor use of the site area during this era.

ISOLATED FIND 3

Isolated Find 3, which was found on January 9, 1987, was defined by a light scatter of prehistoric artifacts located approximately 300 meters southeast of the channelized Middle Fork of the Obion River (Figure 2). At the time of survey the area was in harvested soybeans, with a surface visibility of approximately 90 percent. Five possible artifacts were found (total collecting time, approximately 1 person hour), including two unmodified flakes, a retouched flake, and two cobbles (Appendix I-1). The material was found over an area approximately 50 meters (N/S) by 20 meters (E/W) in extent, just to the east of a low rise at the edge of a large plowed field. The area is located

on the eastern side of the elevated upland terrain that begins about two kilometers east of the confluence of the Middle and South Forks of the Obion River. Sites 4, 5, 6, and 7 are located on this same landform, between 300 and 500 meters to the northwest, west, and southwest.

ISOLATED FIND 4

Isolated Find 4, which was found on January 12, 1987, consisted of two cobble tools located on a low rise on the southeastern end of Beech Ridge, approximately 500 meters due north of the channelized course of the Middle Fork of the Obion River (Figure 2). At the time of survey the site area was in harvested corn, offering about 75 percent surface visibility. The cobble tools, a hammerstone and a pitted cobble (Appendix I-1; Figure 24m), were found about 30 meters apart just east of a thin tree line cutting from north to south across the field. Several small rock fragments were seen that might have been brought in, but no other prehistoric artifacts were observed (total collection time, approximately one person hour). Site 8 is located approximately 125 meters to the west, across the tree line.

ISOLATED FIND 5

Isolated Find 5 was a single large (36.1 gram) tan chert secondary decortication flake that was found on the eastern side of Beech Ridge, approximately 500 meters northwest of the channelized Middle Fork of the Obion River (Figure 2). At the time of survey, January 12, 1987, the site area was in harvested corn, offering approximately 75 percent visibility. The flake was found about 25 meters out into the field, and about 100 meters west of a point of land marking the edge of Beech Ridge. No other artifacts were observed anywhere in the area, in spite of its seemingly favorable location (total collection time, approximately one person hour). Site 40WK14 is located approximately 300 meters to the northwest on the edge of the field.

ISOLATED FIND 6

Isolated Find 6 was a scatter of brick fragments located on the northern side of Beech Ridge, approximately 800 meters north of the channelized Middle Fork of the Obion River (Figure 2). At the time of survey, January 12, 1987, the site area was in harvested corn, offering approximately 75 percent surface visibility. Artifacts were observed over an approximately 50 meter diameter area near the edge of the field. A temporary structure is shown in this location on the 1954 Rutherford 7.5' U.S.G S. Quadrangle, and the debris is

probably the remains of this building. While a number of plow reduced machine cut brick fragments were observed, only four pieces were collected. The only non-brick artifacts observed were a stoneware sherd and a small tan chert flake core (Appendix I-1, I-4). In the absence of other (i.e., domestic) historic artifactual debris, the site is thought to have been a farm outbuilding of some kind. Minor prehistoric use of the area is indicated by the core.

SUMMARY

The descriptions of sites found outside the project right-of-way provide a valuable context from which to view the site and isolated finds that were found within the direct impact zone. The survey indicates that sites in this part of western Tennessee tend to be common on elevated upland areas, back away from the floodplain itself. Comparison of site areas originally reported in the early and mid 1970's, furthermore, indicates that a tremendous amount of destruction has occurred, mostly due to sheet erosion. The assemblages described and illustrated here additionally provide a general picture, to those working outside the immediate study area, of what archaeological remains in this part of west Tennessee look like.

VIII. RECOMMENDATIONS AND CONCLUSIONS

INTRODUCTION

The survey of the Obion River Project Area in Obion, Weakley, and Gibson Counties, western Tennessee, recovered information from 20 sites and six isolated find areas. Three sites and two isolated finds were located in the project direct impact zone. Management recommendations for these sites, and for sites near the project right-of-way, are provided below, followed by a brief concluding discussion on what the project has told us about past human use of this part of western Tennessee.

CRITERIA FOR THE EVALUATION OF SIGNIFICANCE

At the most fundamental level, the cultural resources identified through this project are evaluated with reference to published National Register of Historic Places eligibility criteria. Generally, sites must be at least 50 years old, and only those sites: (1) associated with important historical events; (2) associated with the lives of important historical individuals; 3) that contain distinctive construction; or (4) "that have yielded, or may be likely to yield, information important in prehistory and history," shall be considered eligible for inclusion on the National Register (National Park Service 1977:6).

The sites discovered on this survey potentially qualify only under the last criterion. Objective evaluation of eligibility under this criterion necessarily requires that the evaluation procedure be refined to consider a more focused set of variables that take into account local and regional concerns, and site-specific conditions. Toward this end, four additional criteria were identified and employed in the evaluation of site significance. These are:

(1) Degree of Integrity. Does the site contain intact remains such that analysis can separate material by component, or is there a high degree of mixing or site disturbance?

(2) Degree of Preservation. Does the site contain preserved features, faunal or floral remains, skeletal remains or materials appropriate for absolute dating?

(3) Uniqueness of the Site. Could preservation or further investigation of a site save or yield insightful information, or is information it contains redundant relative to other sites in the area that are preserved or that have been investigated previously? Can the remains at a site significantly contribute to our understanding of the area's history or prehistory, or are they relatively

uninformative?

(4) Relevance to Ongoing or Future Research. In consideration of the present state of knowledge and research directions in the region, could this site fulfill a basic research need? Would the preservation of this site provide valuable data in the future? This criterion actually subsumes many of the other points listed here. However, there are many cases where a site can contribute to a current research theme, regardless of its preservation, size, density, uniqueness or degree of integrity.

Using these criteria, all sites are recommended as candidates for one of the following National Register status categories:

1. Sites which can be positively evaluated for National Register eligibility without further work.

2. Sites which can be negatively evaluated for National Register eligibility without further work.

3. Sites which require further work before National Register eligibility can be determined.

SITE SPECIFIC RECOMMENDATIONS

In all, five cultural properties were found in the project direct impact zone, three sites and two isolated finds. The three sites were all along the Middle Fork of the Obion River, while the two isolated finds were found at the extreme southern end of the South Fork of the Obion River (Figure 2). The isolated finds were found in plowed fields characterized by close to 100 percent surface visibility. The first isolated find (I-1) was of doubtful antiquity, and consisted of a possible chert shatter fragment. Similar small pieces of chert were observed among limestone gravels used to lime fields outside the project right-of-way. The second isolated find (I-2) encompassed four recent historic artifacts. Subsequent intensive examination of the area around these isolates, including excavation of subsurface shovel tests, failed to detect evidence for additional significant or potentially significant cultural remains meeting any of the criteria established above. These isolated find areas are, accordingly, not believed to be eligible for inclusion on the National Register of Historic Places, and no further work at them is recommended.

The three sites (S-4, S-10, and S-14; see Figure 2) in the Sharon portion of the study area, along the Middle Fork of the Obion River, were found in close proximity to one another, approximately one and a half miles east of the confluence of the Middle and South Forks of the Obion River. All three sites are located on an old elevated terrace remnant that has been bisected by the

river channel. Two of the sites (S-10 and S-14) were located by shovel testing in wooded terrain along the north side of the river, while the third site (S-4) was found in a plowed field on the south side of the river. All three sites are low density prehistoric artifact scatters. Site S-10 also contained a recent historic component. Only small numbers of artifacts were found at each site, most from plowed or otherwise disturbed deposits, and no cultural features were recovered in undisturbed or subplowzone context. Based on the criteria noted above, these site areas are not believed to be eligible for inclusion on the National Register of Historic Places, and no further work at them is recommended.

No other cultural properties (sites or isolated finds) were found in either the Sharon or Sidonia portions of the project right-of-way.

An additional 20 cultural properties (16 sites and four isolated finds) were found at varying distances outside the right-of-way (Figure 2). These properties represent known sites relocated as part of the current project (to see if they extended into the right-of-way), and new sites discovered while entering or leaving the project right-of-way. All of these properties are more than 100 meters beyond the project right-of-way, and most are considerably further away than that. Care should be taken to avoid these properties during planned construction activities. Detailed locational information on these properties is presented in Chapter VII. One of these sites, 40GB41, produced extensive, well preserved and potentially highly significant archaeological remains. As this site is located approximately 150 meters from the project right-of-way, extreme care should be taken to avoid it during any planned construction activity.

Based on the results of the field investigations, including our geomorphological examination, we do not believe a further stage of deep site testing in the direct impact zone would be warranted. We were able to carefully examine soil profiles from 3 to 5 meters in depth in almost every area of the project, on foot and using a boat. As such, we were able to inspect representative examples of all the landforms in the project area that would be examined by a deep site (i.e., backhoe) testing effort. This was possible due to the channelized nature of the Middle and South Forks of the Obion River. The excavated channel represents a linear transect, repeatedly cross-cutting the old meandering natural courses of these streams. As such, old stream channel, levee/terrace, and backswamp profiles are all exposed in the existing channel walls. No cultural remains were observed in these bank profiles, which represent many times the area that could be examined by a backhoe.

The research program indicates that most of the project area, prior to modern drainage, lay in terrain (old backswamp areas) unsuited to either prehistoric or historic settlement. Prior to the channelization of these streams earlier in the century, much of the project area was seasonally or permanently inundated. This fact was disclosed in discussions with long time

residents of the area, who used to fish over what are now cultivated fields or woodlots. The geomorphological examination supported this interpretation (Chapter II). The backswamp deposits typical of most bank profiles, except those near old channels, appear to have a considerable antiquity in the project area, and are hence unlikely to have seen extensive settlement at any time in the recent past (i.e., during much of the Holocene). This patterning is reflected in the occurrence of sites in the general area; almost all of the cultural remains detected were on old, elevated terrace remnants considerably (10 feet or more) above the surrounding terrain. Exceptions to this pattern were isolated finds, recent historic artifacts, or artifacts in disturbed contexts. While deeply buried cultural deposits may be present in the project area, this is considered unlikely. Given the extensive profiles already carefully examined (over ten miles of exposed bank), their detection, furthermore, would be both extremely difficult and tremendously expensive.

CONCLUSIONS

The 1987 Obion River Survey project resulted in the collection of a moderate amount of information on prehistoric sites and assemblages in the vicinity of the confluence of the Middle and South Forks of the Obion River. Given the focus on extensive illustration and description, the project report should offer local and regional researchers a good picture of the kinds of cultural remains that can be expected in this area, and how they might be best collected and recorded. Several specific observations can also be drawn from the project work, about the effectiveness of specific field procedures, and about past human use of this area.

The Obion River Survey Project marks the second major effort in recent years to examine a segment of a local drainage in this portion of northwest Tennessee. The first, by Jolly (1985), was conducted in a similar environmental setting, along channelized segments of the South Fork of the Forked Deer River. Taken together, the results of these studies suggest several useful ways to maximize the potential of these kinds of surveys. First, use of a boat to examine bank profiles is critical to interpretting the depositional history of local floodplain settings. Although not productive in the present instance, survey from a boat also appears to be the best way to examine extensive soil profiles for signs of deeply buried sites. Second, screening shovel test fill is absolutely indispensable to effective site discovery. Given the extremely low artifact densities encountered at the two sites discovered by shovel testing during the present project, and the small size of the artifacts, it is improbable that these sites would have been located if screening had not been employed. Third, controlled surface collection, specifically the piece plotting of artifact scatters in conjunction with the preparation of a site contour map, is an excellent method of documenting sites. The procedure, used on Site 4, provided fine grained information on

the spatial structure, and specific location, of the artifacts defining the site. The general collections obtained from sites outside the project right-of-way, while useful data, tell us little about the spatial structure of the sites producing these assemblages. In most cases these sites would have to be examined again in considerable detail before they could be efficiently tested. At site 4, in contrast, it is possible to relocate the artifact concentration with a high degree of accuracy from the permanent site datum.

The Obion River Survey Project also provides useful information about past human land use in this general area. It is evident, for example, that both prehistoric and early historic populations appear to have avoided settlement, or even extended use of floodplain areas. While the low lying areas adjacent to old active channels may have seen intermittent visitation by travelers, or by individuals or groups engaged in hunting, gathering, and fishing activity, little long term use is indicated. Historic structures, and almost all prehistoric artifact scatters, were located on elevated upland surfaces at varying distances from the river. The principal area where sites were found near the channel was along Beech Ridge, where the upland surface had been bisected by the old channel. Exceptions to this general rule, notably Sites 1, 2, and 3, and 40GB41, appear to have been located on knolls or low rises in the floodplain. At some of these sites, notably at 40GB41, part of these old elevated surfaces may still protrude. Some, however, may be at or near the modern ground surface, due to the filling of the surrounding landscape by alluvium. Successful prediction of where such landforms may be located would appear to be a major, unresolved research challenge in this general region. Finally, the project demonstrates the kind of archaeological record that may be left when comparatively recent historic structures are abandoned and dismantled; typically, fairly minimal remains are all that survive, and the sites become nearly archaeologically invisible.

Prehistoric site assemblages from the project area also show some interesting tendencies. First, at many of the sites a high proportion of modified to unmodified flakes was observed. That is, at many local sites, wear or intentionally retouched flake tools formed an appreciable part of the flake assemblage. This may suggest a high degree of utilization and conservation, possibly due to a general scarcity of readily available raw material. Some of this may also reflect the collecting strategy employed. Most of the assemblages are derived from general surface collections, a strategy that probably resulted in the collection of larger, more readily apparent flakes. Larger flakes may have been utilized more often than smaller, harder to handle flakes. Wherever screening was employed in the present project (Sites 4,10, and 14; Appendix I), unmodified debitage tended to form a comparatively larger portion of the total site flaked stone assemblage. While collecting procedures thus must be controlled for, the general pattern is pronounced, and suggests fairly high intensity utilization of raw material locally.

A high incidence of cobble tools, particularly possible plant processing tools such as nutting stones, grinding basins, and pestles, was also observed on local sites. Site use in plant processing activity, rather than or in addition to use for hunting-related activities, is thus suggested at many locations. Cultural historical observations can also be made. Most of the prehistoric sites in the project area yielded some evidence for Woodland period use, typically by the presence of one or more grog tempered sherds within the assemblage (N=14, 73.7 percent of all sites). Fairly intensive early Middle Woodland use of the area is indicated, at least when compared with earlier and later periods. Baked clay object fragments were also common, occurring on several sites, further evidence for moderate Late Archaic/Woodland use of the area; many of the baked clay object fragments may well date to the Woodland period. Diagnostic artifacts from other periods were rare in contrast.

The analysis also indicates that fair-sized assemblage samples need to be collected before local sites can be closely dated. The collection of diagnostic projectile points, and ceramcis with recognizable paste/finish combinations, is particularly critical. Ceramics assemblages in the project area were dominated by grog tempered wares, with varying admixtures of sand or grog noted. While some previous investigators have put considerable emphasis on distinguishing subtle variations in the occurrence of these inclusions locally, and have established fairly fine-grained cultural and chronological subdivisions based on these differences, this was not attempted in the present study. This was primarily because the sample sizes were small, and because none of the materials came from unambiguous stratigraphic context. Until secure stratigraphic samples can be established locally, it is difficult to ascertain how much these subtle paste differences actually reflect temporal or cultural factors. Subtle variability in form and manufacturing procedures also characterizes the sorting of local projectile points, another area where the development of useful sorting criteria will probably only come with the excavation of major stratified sites.

The Obion River Survey Project results thus offer one perspective, and a sample of information on the past human occupation of northwest Tennessee. Hopefully, it also demonstrates the contributions to archaeological knowledge that even comparatively small scale survey projects can make. Perhaps the most important contribution comes in the effective documentation of the sites and collections, letting researchers know what is in an area, and offering suggestions as to how it might be profitably explored in the future.

BIBLIOGRAPHY

Anderson, David G.
1979 *Excavations at Four Fall Line Sites: The Southeastern Columbia Beltway Project.* Commonwealth Associates, Inc., Report No. R-2008.

Anderson, David G. and E. Suzanne Carter
1985 Archaeological Investigations at Four Open Air Sites in Eastern El Paso, Texas. In *Views of the Jornada Mogollon: Proceedings of the Second Jornada Mogollon Conference*, edited by C.M. Beck, pp. 78-106. Eastern New Mexico University, Contributions in Anthropology 12.

Anderson, David G. and Glen T. Hanson
1985 The Early Archaic Occupation of the Savannah River Basin. Paper presented at the 42nd Annual Meeting of the Southeastern Archaeological Conference, Birmingham, Alabama.

Anderson, David G. and Joseph Schuldenrein
1983 Mississippian Settlement in the Southern Piedmont: Evidence from the Rucker's Bottom Site, Elbert County, Georgia. *Southeastern Archaeology* 2:98-117.

1985 *Prehistoric Human Ecology Along the Upper Savannah River: Excavations at the Rucker's Bottom, Abbeville, and Bullard Site Groups.* Atlanta Archeological Services Branch, National Park Service, Russell Papers 1985.

Anderson, David G., Charles E. Cantley, and A. Lee Novick
1982 *The Mattassee Lake Sites: Archeological Investigations Along the Lower Santee River in the Coastal Plain of South Carolina.* Atlanta Archeological Services Branch, National Park Service, Special Publication.

Asch, David L. and Nancy B. Asch
1985 Prehistoric Plant Cultivation in West-Central Illinois. In *Prehistoric Food Production in North America*, edited by Richard Ford, pp. 149-203. Museum of Anthropology, University of Michigan, Anthropological Papers 75.

Baldwin, Elizabeth E.
1966 *The Obion Site: An Early Mississippian Center in Western Tennessee.* Unpublished PhD Dissertation prepared for the Department of Anthropology, Harvard University.

Brain, Jeffrey P.
1985 Introduction: Update of DeSoto Studies Since the United States DeSoto Expedition Commission Report. In *Classics of Smithsonian Anthropology Final Report of the United States DeSoto Expedition Commission*, by John R. Swanton, pp. xi-lxxii. Smithsonian Institution Press, Washington, D.C.

Braun, E. Lucy
1950 *Deciduous Forests of Eastern North America.* The Bleakston Company, Philadelphia.

Broster, John B.
1975 An Archaeological Survey of the Middle Fork of the Obion River Watershed: Weakley and Henry Counties, Tennessee. Unpublished manuscript on file at the Tennessee Department of Conservation's Division of Archaeology, Nashville, Tennessee.

Broster, John B., and Lee Schneider
1977 Settlement and Subsistence: An Analysis of Middle Woodland Sites on the South Fork of the Forked Deer River, West Tennessee. *Journal of Alabama Archaeology* 23:58-69.

Brown, James A.
1982 Peer Review. In *Arkansas Archaeology in Review*, edited by Neal L. Trubowitz and Marvin D. Jeter, pp. 351-360. Arkansas Archaeological Survey Research Series No. 15.

Brown, William T., Wesley C. Jackson, Glisson L. Keathley, and Charles L. Moore
1973 *Soil Survey, Obion County, Tennessee.* U.S. Department of Agriculture Soil Conservation Service, Washington, D.C.

Buntley, G. J., R. B. Daniels, E. E. Gamble, and W. T. Brown
1977 Fragipan Horizons in Soils of the Memphis-Loring-Grenada Sequence in West Tennessee. *Soil Sciences Society of America Journal* 41:400-407.

Caldwell, Joseph R.
1964 Interaction Spheres in Prehistory. In *Hopewellian Studies*, edited by Joseph R. Caldwell and Robert L. Hall, pp. 133-143. Illinois State Museum, Scientific Papers No. 12.

Cambron, James W., and David C. Hulse
1964 *Handbook of Alabama Archaeology Part I: Point Types.* The Archaeological Research Association of Alabama, Inc.

Chapman, Carl H.
1975 *The Archaeology of Missouri, Vol. I.* University of Missouri Press, Columbia.

1980 *The Archaeology of Missouri, Vol. II.* University of Missouri Press, Columbia.

Chapman, Jefferson
1976 The Archaic Period in the Lower Little Tennessee River Valley: The Radiocarbon Dates. *Tennessee Anthropologist* 1:1-12.

1985 Archaeology and the Archaic Period in the Southern Ridge and Valley Province. In *Structure and Process in Southeastern Archaeology*, edited by H. Trawick Ward, pp. 137-153. University of Alabama Press, University, Alabama.

Claggett, Stephen R. and John S. Cable (assemblers)
1982 *The Haw River Sites: Archaeological Investigations at Two Stratified Sites in the North Carolina Piedmont.* Commonwealth Associates, Inc., Report No. 2386.

Cleland, Charles E.
1966 *The Prehistoric Animal Ecology and Ethnozoology of the Upper Great Lakes Region.* Museum of Anthropology, University of Michigan, Anthropological Papers 29.

Connaway, John M., Samel O. McGahey, and Clarence H. Webb
1977 *Teoc Creek: A Poverty Point Site in Carroll County, Mississippi.* Mississippi Department of Archives and History, Archaelogical Report No. 3.

Culp, Frederick M.
1961 *Gibson County Past and Present: The First General History of One of West Tennessee's Pivotal Counties.* Gibson County Historical Society, Trenton, Tennessee.

Delcourt, Paul A., and Hazel R. Delcourt
1981 Vegetation Maps for Eastern North America: 40,000 B. P. to the Present. In *Geobotany II*, edited by R.C. Romans, pp. 123-165. Plenum Press, New York.

Delcourt, Hazel R., and Paul A. Delcourt
1985 Quaternary Palynology and Vegetational History of the Southeastern United States. In *Pollen Records of Late-Quaternary North American Sediments*, edited by V. M. Bryant, Jr., and R. G. Holloway, pp. 1-37. American Association of Stratigraphic Palynologists Foundation

Dice, Lee R.
1943 *The Biotic Provinces of North America.* University of Michigan Press, Ann Arbor.

Dickinson, William Clark
1973 *The Fishes of the Obion River System.* Unpublished MS Thesis, Department of Zoology, University of Tennessee, Knoxville, Tennessee.

Dickson, Bruce D., Jr. and L. Janice Campbell
1979 *Reelfoot and Lake Isom National Wildlife Refuges: A Cultural Resources Survey.* New World Research Report of Investigations 20.

Dye, David H.
1975 *Archaeological Resources Within the Mud Creek Watershed.* Report Submitted to the U.S. Department of Agriculture.

Ensor, H. Blaine
1981 *Gainesville Lake Area Lithics: Chronology, Technology, and Use.* University of Alabama, Office of Archaeological Research, Report of Investigations, No. 13.

Faulkner, Charles H., and Major C. R. McCollough
1973 *Introductory Report of the Normandy Reservoir Salvage Project: Environmental Setting, Typoloy, and Survey.* Department of Anthropology, University of Tennessee, Knoxville, Report of Investigations 11.

Fenneman, N. H.
1938 *Physiography of Eastern United States.* McGraw-Hill, New York.

Fisk, Harold N.
1944 Geological Investigations of the Alluvial Valley of the Lower Mississippi River. War Department, Corps of Engineers, United States Army, *Mississippi River Commission Publication,* Number 52.

Ford, Janet L.
1981 Temper and Time in the North Central Hills of Mississippi. *Journal of Alabama Archaeology* 27:57-71.

Ford, Richard I.
1985 The Processes of Plant Food Production in Prehistoric North America. In *Prehistoric Food Production in North America,* edited by Richard I. Ford, pp. 1-18. Museum of Anthropology, University of Michigan, Anthropological Papers 75.

Foss, John E., F. P. Miller, and A. V. Segovia
1985 *Field Guide to Soil Profile Desription and Mapping.* SRI, Inc.

Goodyear, Albert C. III
1974 *The Brand Site: A Techno-functional Study of a Dalton Site in Northeast Arkansas.* Arkansas Archaeological Survey, Research Series 7.

1982 The Chronological Position of the Dalton Horizon in the Southeastern United States. *American Antiquity* 47:382-395.

Griffin, James B.
1967 Eastern North American Archaeology: A Summary. *Science* 156:175-191.

Haggett, Peter
1966 *Locational Analysis in Human Geography.* Edward Arnold, London.

House, John H.
1973 Late Archaic Settlement Patterns in the Eastern Arkansas Ozarks. Paper presented to the Arkansas Academy of Science.

1982 Evolution of Complex Societies in East-Central Arkansas: An Overview of Environments and Regional Data Bases. In *Arkansas Archaeology in Review*, edited by Neal L. Trubowitz and Marvin D. Jeter, pp. 37-47. Arkansas Archaeological Survey, Research Series No. 15.

Howard, Needles, Tammen, and Bergendoff
1982 West Tennessee Tributaries Project (Obion-Forked Deer River Basin). Final Supplement to the Final Environmental Impact Statement. Manuscript on file at the Memphis District Office, U.S. Army Corps of Engineers, Memphis, Tennessee.

Jenkins, Ned J.
1981 *Gainesville Lake Area Ceramic Description and Chronology.* University of Alabama, Office of Archaeological Research, Report of Investigations, No. 12.

Jennings, Jesse D.
1941 Chickasaw and Earlier Indian Cultures of Northeast Mississippi. *The Journal of Mississippi History* 3:155-226.

Jolley, Robert L.
1985 *Archaeological Investigations in the Halls-Fowlkes Region South Fork of the Forked Deer River, West Tennessee.* Cultural Resource Consultants, Inc. Final Contract Report DACW66-84-C-0049) prepared

for the Memphis District of the U.S. Army Corps of Engineers.

Koehler, Thomas Hume
1966 Archaeological Excavation of the Womack Mound. *Mississippi Archaeological Association Bulletin* No. 1.

Larson, Lewis H., Jr.
1972 Functional Considerations of Warfare in the Southeast During the Mississippi Period. *American Antiquity* 37:383-392.

Lewis, Thomas M. N. and Madeline Kneberg
1961 *Eva: An Archaic Site.* University of Tennessee Press, Knoxville.

Mainfort, Robert C., Jr.
1984 An Archaeological Survey of Selected Localities Within the Obion-Forked Deer Drainage, West Tennessee. Manuscript prepared for the Memphis Corps of Engineers, on file at the Division of Archaeology, Tennessee Department of Conservation, Nashville.

1986a *Pinson Mounds: A Middle Woodland Ceremonial Center.* Tennessee Department of Conservation, Division of Archaeology, Research Series.

1986b Tchula/Miller I: A Perspective from Pinson Mounds. In *The Tchula Period in the Mid-South and Lower Mississippi Valley: Proceedings of the 1982 Mid-South Conference*, edited by David H. Dye and Ronald C. Brister, pp. 52-62. Mississippi Department of Archives and History, Archaeological Report 17.

Mainfort, Robert C., John B. Broster, and Karen M. Johnson
1982 Recent Radiocarbon Determinations for the Pinson Mounds Site. *Tennessee Anthropologist* 7:14-19.

Marshall, Edwin H.
1970 *History of Obion County: Towns and Communities, Churches, Schools, Farming, Factories, Socal and Political.* H. A. ALanzer Company. Union City, Tennessee.

Meltzer, David J.
1984 *Late Pleistocene Human Adaptations in Eastern North America.* Unpublished PhD dissertation, Department of Anthropology, University of Washington, Seattle. University Microfilms, Ann Arbor.

Miller, Robert A.
1974 *The Geologic History of Tennessee.* Tennessee Department of Conservation, Division of Geology, Bulletin 74. Nashville.

Morse, Dan F.
1975a Reply to Schiffer. In *The Cache River Archaeological Project: An Experiment in Contract Archaeology*, assembled by Michael B. Schiffer and John M. House, pp. 113-119. Arkansas Archaeological Survey Research Series 8.

1975b Paleo-Indian in the Land of Opportunity: Preliminary Report on the Excavations at the Sloan Site (3GE94). In *The Cache River Archaeological Project: An Experiment in Contract Archaeology*, assembled by Michael B. Schiffer and John M. House, pp. 13-113. Arkansas Archaeological Survey Research Series 8. Fayetteville, Arkansas.

1977 Dalton Settlement Systems: Reply to Schiffer (2). *Plains Anthropologist* 22:149-158.

1982 Regional Overview of Northeast Arkansas. In *Arkansas Archaeology in Review*, edited by Neal L. Trubowitz and Marvin D. Jeter, pp.20-36. Arkansas Archaeological Survey Research Series No. 15. Fayetteville, Arkansas.

Morse, Dan F. and Phyllis A. Morse
1980 *Zebree Archaeological Project: Excavation, Data Interpretation, and Report on the Zebree Homestead Site, Mississippi County, Arkansas.* Ms. on file, U. S. Corps of Engineers. Memphis.

1983 *Archaeology of the Central Mississippi Valley.* Academic Press, New York.

Neusius, Sarah W. and Michael D. Wiant
1985 Early Archaic Settlement in the Little Illinois River Valley. Paper presented at the Annual Meeting of the Midwest Archaeological Conference, Lansing, Michigan.

Peterson, Drexal
1979a *An Archaeological Survey and Assessment of the Wolf River Watershed.* Manuscript prepared for U.S.D.A. Soil Conservation Service. Contract No. 53-4741-9-28

1979b *An Archaeological Survey and Assessment of the Looschatchie Watershed.* Manuscript prepared for U.S.D.A. Soil Conservation Service. Contract No. 53-4741-9-28

Phillips, Phillip
1970 *Archaeological Survey in the Lower Yazoo Basin, Mississippi, 1947-1955.* 2 vols. Papers of the Peabody Museum of Archaeology and Ethnology 60.

Phillips, Phillip, James Ford, and James B. Griffin
1951 *Archaeological Survey in the Lower Mississippi Alluvial Valley, 1940-1947.* Papers of the Peabody Museum of Archaeology and Ethnology 25.

Price, James and James Krakker
1975 *Dalton Occupation of the Ozark Border.* University of Missouri, Museum Briefs 20.

Prins, Dixie Eldridge
1965 *The Life and Times of Greenfield, Tennessee, with Sketches of Weakley County.* The Greenfield Historical Society, Greenfield.

Redman, Charles L. and Patty Jo Watson
1970 Systematic Intensive Surface Collection. *American Antiquity* 35:279-291.

Saucier, Roger T.
1974 Quarternary Geology of the Lower Mississippi Valley. *Arkansas Archaeological Survey, Publication on Archaeology, Research Series* 6.

n.d. Late Quaternary Terraces of Western Tennessee: Geomorphological Interpretations. Unpublished manuscript on file with the Vicksburg District Office of the U. S. Army Corps of Engineers.

Schiffer, Michael B.
1975 Some Further Comments on the Dalton Settlement Pattern Hypothesis. In *The Cache River Archaeological Project: An Experiment in Contract Archaeology,* assembled by Michael B. Schiffer and John H. House, pp. 103-112. Arkansas Archaeological Survey, Research Series No. 8.

Semken, Holmes A., Jr.
1983 Holocene Mammalian Biogeography and Climatic Change in the Eastern and Central United States. *In Late Quaternary Environments of the United States, Volume 2, The Holocene,* edited by H. E. Wright, Jr., pp. 182-207. University of Minnesota Press, Minneapolis.

Shelford, Victor E.
1963 *The Ecology of North America.* The University of Illinois Press, Urbana.

Smith, Bruce D.
1978 Variation in Mississippian Settlement Patterns. In *Mississippian Settlement Patterns,* edited by Bruce D. Smith, pp. 479-503.

Academic Press, New York.

1984 Mississippian Expansion: Tracing the Historical Development of an Explanatory Model. *Southeastern Archaeology* 3:13-32.

1986 The Archaeology of the Southeastern United States: From Dalton to DeSoto. *Advances in World Archaeology* 5:1-92.

Smith, Gerald P.

1972 The Late Archaic Through Early Woodland Periods in West Tennessee. *Southeastern Archaeological Conference Bulletin* 15:108-118.

1979a *Archaeological Surveys in the Obio-Forked Deer and Reelfoot-Indian Creek Drainages, 1965 Through Early 1975.* Memphis State University Anthropological Research CenteOccasional Papers 9.

1979b *Cultural Resources Survey of Hatchie National Wildlife Refuge, Tennessee.* Interagency Archeological Services-Atlanta, Contract No. A-5830 (79).

Smith, Gerald P., and Kenneth Hartsell

1984 *An Archaeological Overview and Management Plan for the Milan Army Ammunition Plant, Gibson and Carroll Counties, Tennessee.* Contract CX-5000-3-0771 Final Report; Darcom Report # 5, Atlanta Archaeological Services Branch, National Park Service, Atlanta.

Springer, M. E., and J. A. Elder

1980 *Soils of Tennessee.* United States Department of Agriculture, Soil Conservation Service, Bulletin 596.

Struever, Stuart and Gail L. Houart

1972 An Analysis of the Hopewell Interaction Sphere. In *Social Exchange and Interaction*, edited by Edwin M. Wilmsen, pp. 47-49. Anthropological Papers No. 46, Museum of Anthropology, University of Michigan, Ann Arbor.

U.S. Army Corps of Engineers

1975 West Tennessee Tributary Project. Manuscript on file with the Memphis District, U.S. Army Corps of Engineers, Memphis, Tennessee.

Vaiksnoras, John

1973 Climate. In *Soil Survey, Obion County, Tennessee*, by William T. Brown, Wesley C. Jackson, Glisson L. Keathley, and Charles L. Moore, pp.2-4. U. S. D. A. Soil Conservation Service, Washington, D.C.

Vaughan, Virginia C.
1983 *Tennessee County History Series: Weakley County.* Memphis State University Press, Memphis.

Ward, George R.
1985 An Archaeological and Historical Assessment of One Bridge on SA-2723, LM6.10, Over South Fork Obion River, Gibson County, Tennessee. Unpublished manuscript on file at the Tennessee Department of Conservation, Division of Archaeology, Nashville.

Williams, J. Raymond
1974 The Baytown Phases in the Cairo Lowland of Southeast Missouri. *The Missouri Archaeologist* 36.

Williams, Samuel Cole
1928 *Early Travels in the Tennessee Country, 1540-1800.* The Wautauga Press, Johnson City, Tennessee.

1930 *The Beginnings of West Tennessee In the Land of the Chickasaws, 1541-1841.* The Watauga Press, Johnson City, Tennessee.

Williams, Stephen
1954 *An Archaeological Study of the Mississippian Culture in Southeast Missouri.* Unpublished Ph.D. dissertation, Department of Anthropology, Yale University.

1982 The Vacant Quarter Hypothesis. Paper presented at the 40th Annual Meeting of the Southeastern Archaeological Conference, Memphis, Tennessee.

Williams, Stephen and Jeffrey P. Brain
1983 *Excavations at the Lake George Site, Yazoo County, Mississippi, 1958-1960.* Papers of the Peabody Museum of Archaeology and Ethnology, Harvard University, Volume 74.

Yarnell, Richard A., and M. Jean Black
1985 Temporal Trends Indicated by a Survey of Archaic and Woodland Plant Food Remains from Southeastern North America. *Southeastern Archaeology* 4:93-106.

APPENDICES

I. ARTIFACTS FOUND DURING THE OBION RIVER SURVEY PROJECT

II. PROJECT CORRESPONDANCE

III. PROJECT SURVEY AREA: GROUND CONDITIONS AND GENERAL SITE LOCATIONS

IV. PROJECT PERSONNEL

APPENDIX I.
PREHISTORIC ARTIFACTS FOUND DURING THE OBION RIVER SURVEY

TOTAL ARTIFACT INVENTORY

Site 1		Raw Material	Weight	Length	Width	Thickness	Commentary
Halted Bifaces	2						(See Appendix I-2)
Ceramics	2						(See Appendix I-3)
Hammerstone/Chopper	1	Tan chert	457.5g	89mm	65mm	52mm	
Chopper	1	Tan chert	303.3g	92mm	62mm	39mm	
Chopper Fragment	1	Tan chert	128.3g				
Chopper	1	Ferruginous sandstone	90.2g	54mm	48mm	25mm	
Core	1	Quartz	309.6g	79mm	77mm	45mm	
Core (cobble)	1	Tan chert	31.6g	48mm	33mm	26mm	
Tested Cobble	1	Pink (HT) chert	229.2g	68mm	60mm	44mm	
Core Fragment	1	Sandstone	72.2g				
Core Fragment	1	Tan chert	104.9g				
Hammerstone Fragment	1	Ferruginous sandstone	131.3g				
Biface Fragment	1	Pink (HT) chert	48.8g				
Abrader Fragment	1	Ferruginous sandstone	16.4g				
Wear Retouched Flake Tool	1	Pink (HT) chert	40.1g				
Wear Retouched Flake Tool	1	Pink (HT) chert	2.7g				
Thinning Flakes (Interior)	8	(3 Pink (HT) chert) (4 Tan chert) (1 White chert)	17.0g				
Unspecialized Flakes (2 Interior, 2 Secondary)	4	(1 Pink (HT) chert) (3 Tan chert)	15.8g				
Flake Fragments (Interior)	8	(4 Gray chert) (2 Pink (HT) chert) (2 Tan chert)	9.5g				
Shatter Fragments (All Interior)	3	Pink (HT) chert	12.5g				
Cracked Rock	7	Misc.	134.7g				
TOTAL	48	Artifacts					

Site 1A		Raw Material	Weight	Length	Width	Thickness	Commentary
Core/Chopper/Scraper	1	Tan chert	333.2g	110mm	74mm	40mm	Figure 24d
Core	1	Pink (HT) chert	44.8g	59mm	35mm	21mm	
Core	1	Tan chert	43.1g	52mm	37mm	21mm	
Core Fragment?	1	Tan chert	24.5g	43mm	28mm	18mm	
Pestle	1	Sandstone	318.3g	73mm	67mm	57mm	Figure 24f
Cracked Rock	2	Misc.	52.0g				
TOTAL	7	Artifacts					

Site 2		Raw Material	Weight	Length	Width	Thickness	Commentary
Historic Artifacts	1						(See Appendix I-4
Halted Bifaces	1						(See Appendix I-2)
Ground Slab (metate)	1	Metavolcanic	1178.5g	133mm	113mm	49mm	Figure 24n
Chopper (halted?)	1	Tan chert	78.3g	59mm	53mm	24mm	
Abrader Fragment	1	Ferruginous sandstone	219.3g				
Hammerstone Fragment	1	Tan chert	270.3g				
Intentionally Retouched Flake Tool	1	Pink (HT) chert	3.4g	29mm	22mm	17mm	
Intentionally Retouched Flake Tool	1	Tan chert	44.5g				
Shatter Fragments (All Secondary)	2	Tan chert	2.1g				
Chunks	2	Ferruginous Sandstone	108.0g				
TOTAL	11	Artifacts					

TOTAL ARTIFACT INVENTORY

Site 3		Raw Material	Weight	Length	Width	Thickness	Commentary
Hammerstone Fragment	1	Sandstone	132.6g				
Chopper (?)	1	Ferruginous sandstone	168.8g	85mm	63mm	26mm	
Utilized Core (Unifacial Retouch)	1	Tan chert	81.3g	62mm	42mm	34mm	
Exhausted Core	1	Pink (HT) chert	25.0g	37mm	35mm	22mm	
Biface (Stage 4)	1	Tan chert	26.2g	56mm	42mm	12mm	
Wear Retouched Flake Tool	1	Pink (HT) chert	4.8g				
Thinning Flake (Interior)	1	Tan chert	0.4g				
Cracked Rock	1	Misc.	7.4g				
TOTAL	8	Artifacts					

SITE 4

PLOTTED SURFACE ARTIFACTS		Raw Material	Weight	Length	Width	Thickness	Commentary
1. Thinning Flake (Interior)	1	Pink (HT) chert	0.2g				
2. Flake Fragment (Interior)	1	Pink (HT) chert	0.1g				
3. Wear Retouched Flake Tool	1	Pink (HT) chert	2.9g				
4. Flake Fragment (Interior)	1	Pink (HT) chert	0.2g				
5. Wear Retouched Flake Tool	1	Tan chert	0.6g				
6. Thinning Flake (Interior)	1	Pink (HT) chert	0.5g				
7. Wear Retouched Flake Tool	1	Pink (HT) chert	1.0g				
8. Thinning Flake (Interior)	1	Pink (HT) chert	0.2g				
9. Chunk	1	Ferruginous sandstone	14.6g				
10. Thinning Flake (Interior)	1	Pink (HT) chert	0.2g				
11. Wear Retouched Flake Tool	1	Tan chert	0.5g				
12. Prehistoric Ceramics	1		0.8g				Figure 23o
13. Stage 4 Biface Fragment	1	Pink (HT) chert	13.5g				Figure 23f
14. Wear Retouched Flake Tool	1	Pink (HT) chert	0.6g				
15. Wear Retouched Flake Tool	1	Tan chert	3.8g				
16. Thinning Flake (Interior)	1	Pink (HT) chert	0.3g				
17. Flake Fragment (Interior)	1	Tan chert	0.7g				
18. Wear Retouched Flake Tool	1	Pink (HT) chert	3.7g				
19. Wear Retouched Flake Tool	1	Pink (HT) chert	3.0g				
20. Thinning Flake (Interior)	1	Pink (HT) chert	1.3g				
21. Wear Retouched Flake Tool	1	Pink (HT) chert	2.2g				
22. Wear Retouched Flake Tool	1	Pink (HT) chert	4.4g				
23. Wear Retouched Flake Tool	1	Pink (HT) chert	1.3g				
24. Wear Retouched Flake Tool	1	Pink (HT) chert	14.8g				
25. Thinning Flake (Interior)	1	Pink (HT) chert	0.3g				
26. Flake Fragment (Interior)	1	Tan chert	0.3g				
27. Flake Fragment (Interior)	1	Pink (HT) chert	0.1g				
28. Biface Fragment (Stage 4)	1	White chert	0.5g				
29. Wear Retouched Flake Tool	1	Tan chert	1.0g				
30. Flake Fragment (Interior)	1	Tan chert	0.6g				
31. Wear Retouched Flake Tool	1	Pink (HT) chert	0.7g				
32. Flake Fragment (Interior)	1	Pink (HT) chert	0.2g				
33. Intentionally Retouched Flake Tool	1	Pink (HT) chert	4.6g				Figure 24i
34. Thinning Flake (Interior)	1	Pink (HT) chert	0.6g				
35. Flake Fragment (Interior)	1	Tan chert	0.1g				
36. Wear Retouched Flake Tool	1	Tan chert	0.9g				
37. Nutting/Hammerstone	1	Sandstone	325.4g	95mm	70mm	33mm	
38. Flake Fragment (Interior)	1	Pink (HT) chert	0.1g				
39. Flake Fragment (Interior)	1	Pink (HT) chert	0.2g				
40. Thinning Flake (Interior)	1	Pink (HT) chert	0.3g				
41. Thinning Flake (Interior)	1	Tan chert	0.1g				
42. Flake Fragment (Interior)	1	Pink (HT) chert	0.8g				
43. Flake Fragment (Interior)	1	Pink (HT) chert	0.2g				
44. Flake Fragment (Interior)	1	Pink (HT) chert	0.5g				
45. Thinning Flake (Interior)	1	Pink (HT) chert	0.4g				

SITE 4

PLOTTED SURFACE ARTIFACTS		Raw Material	Weight	Length	Width	Thickness	Commentary
46. Wear Retouched Flake Tool	1	Pink (HT) chert	9.6g				Figure 23k
47. Wear Retouched Flake Tool	1	Tan chert	2.0g				
48. Wear Retouched Flake Tool	1	Pink (HT) chert	3.2g				
49. Thinning Flake (Interior)	1	Pink (HT) chert	0.3g				
50. Thinning Flake (Interior)	1	Tan chert	0.9g				
51. Flake Fragment (Interior)	1	Tan chert	1.2g				
51. Thinning Flake (Interior)	1	Tan chert	1.1g				
52. Flake Fragment (Interior)	1	Tan chert	0.3g				
53. Flake Fragment (Interior)	1	Tan chert	0.6g				
54. Thinning Flake (Interior)	1	Tan chert	2.1g				
55. Thinning Flake (Interior)	1	Pink (HT) chert	0.1g				
56. Shatter (Interior)	1	Pink (HT) chert	0.8g				
57. Wear Retouched Flake Tool	1	Tan chert	0.7g				
58. Flake Fragment (Interior)	1	Tan chert	1.4g				
59. Thinning Flake (Interior)	1	Pink (HT) chert	0.4g				
60. Wear Retouched Flake Tool	1	Pink (HT) chert	0.8g				
61. Flake Fragment (Interior)	1	Tan chert	0.3g				
62. Thinning Flake (Interior)	1	Tan chert	2.5g				
63. Biface Fragment (Stage 4)	1	Pink (HT) chert	9.5g				
64. Thinning Flake (Interior)	1	Pink (HT) chert	1.5g				
65. Intentionaly Retouched Flake Tool	1	Pink (HT) chert	0.8g				
66. Wear Retouched Flake Tool	1	Pink (HT) chert	2.5g				
67. Intentionaly Retouched Flake Tool	1	Pink (HT) chert	1.5g				Figure 23m
68. Wear Retouched Flake Tool	1	Pink (HT) chert	1.6g				
69. Thinning Flake (Interior)	1	Pink (HT) chert	2.6g				
70. Wear Retouched Flake Tool	1	Pink (HT) chert	0.9g				
71. Flake Fragment (Interior)	1	White chert	1.1g				
72. Intentionaly Retouched Flake Tool	1	White chert	4.0g				
72. Thinning Flake (Interior)	1	White chert	1.3g				
72. Thinning Flake (Interior)	1	White chert	1.1g				
73. Flake Fragment (Interior)	1	Pink (HT) chert	2.0g				
74. Thinning Flake (Interior)	1	Pink (HT) chert	1.4g				
75. Thinning Flake (Interior)	1	Pink (HT) chert	0.5g				
76. Thinning Flake (Interior)	1	Pink (HT) chert	0.2g				
77. Thinning Flake (Interior)	1	Tan chert	0.8g				
78. Wear Retouched Flake Tool	1	Pink (HT) chert	0.3g				
79. Wear Retouched Flake Tool	1	Pink (HT) chert	1.4g				

Site 4 Test Unit Artifacts		Raw Material	Weight	Length	Width	Thickness	Commentary
Level 1 (0-10 cm)							
Wear Retouched Flake Tool	1	Tan chert	7.2g				Figure 23h
Wear Retouched Flake Tool	1	Pink (HT) chert	1.6g				
Wear Retouched Flake Tool	1	Gray chert	1.5g				
Thinning Flakes	22	(5 Gray chert) (16 Pink (HT) chert) (1 White chert)	4.2g				
Unspecialized Flake (Interior)	1	Tan chert	1.8g				
Flake Fragments (1 Secondary, 36 Interior)	37	(1 Gray chert) (32 Pink (HT) chert) (1White chert) (3 Tan chert)	10.3g				
Chunk	1	Ferruginous Sandstone	0.9g				
TOTAL	63	Artifacts					

TOTAL ARTIFACT INVENTORY

Site 4 Test Unit Artifacts		Raw Material	Weight	Length	Width	Thickness	Commentary
Level 2 (10-20 cm)							
Ceramics	1		0.9g				(See Appendix I-3)
Intentionally Retouched Flake Tool	1	Pink (HT) chert	4.3g				
Wear Retouched Flake Tool	1	Pink (HT) chert	1.7g				
Wear Retouched Flake Tool	1	Pink (HT) chert	1.6g				
Wear Retouched Flake Tool	1	Pink (HT) chert	0.7g				
Wear Retouched Flake Tool	1	Gray chert	0.2g				
Thinning Flakes (Interior)	8	(2 Gray chert) (3 Pink (HT) chert) (1 White chert) (2 Tan chert)	1.9g				
Flake Fragments (Interior)	19	(3 Gray chert) (13 Pink (HT) chert) (2 White chert) (1 Tan chert)	2.7g				
Chunks	5	Ferruginous Sandstone	2.1g				
TOTAL	38	Artifacts					

Site 4 Test Unit Artifacts		Raw Material	Weight	Length	Width	Thickness	Commentary
Level 3 (20-30 cm)							
Wear Retouched Flake Tool	1	Pink (HT) chert	1.4g				
Thinning Flakes (Interior)	2	Pink (HT) chert	2.8g				
Flake Fragments (Interior)	2	Pink (HT) chert	0.2g				
Chunks	6	Ferruginous Sandstone	8.7g				
TOTAL	11	Artifacts					

Site 4 Test Unit Artifacts		Raw Material	Weight	Length	Width	Thickness	Commentary
Level 4 (30-40 cm)							
Flake Fragment (Interior)	1	Pink (HT) chert	0.1g				
TOTAL	1	Artifacts					

Site 4 Test Unit Artifacts		Raw Material	Weight	Length	Width	Thickness	Commentary
Level 5 (40-50 cm)							
Thinning Flake (Interior)	1	Pink (HT) chert	1.5g				
TOTAL	1	Artifacts					

Site 5		Raw Material	Weight	Length	Width	Thickness	Commentary
Historic Artifacts	6						(See Appendix I-4)
Nutting/Hammerstone	1	Sandstone	280.7g	85mm	58mm	40mm	Figure 24h
Core (Exhausted)	1	Gray chert	27.5g	48mm	35mm	18mm	
Chunk	1	Tan chert	92.0g				
Chunks	2	Ferruginous Sandstone	175.0g				
TOTAL	11	Artifacts					

Site 5A		Raw Material	Weight	Length	Width	Thickness	Commentary
Historic Artifacts	2						(See Appendix I-4)
Hafted Biface Fragment	1	Gray chert	8.0g				
Core (Utilized)	1	Tan chert	77.8g	64mm	35mm	32mm	
Hammerstone Fragment	1	Quartz	16.0g				
Abrader	1	Ferruginous Sandstone	59.1g	50mm	44mm	19mm	
Abrader (?)	1	Ferruginous Sandstone	575.3g	100mm	83mm	48mm	
Intentionally Retouched Flake Tool	1	Tan chert	9.9g				
Ceramics (?)	1		3.4g				(See Appendix I-3)
Thinning Flakes (Interior)	2	Tan chert	3.6g				
Chunks	4	Ferruginous Sandstone	134.9g				
TOTAL	15	Artifacts					

TOTAL ARTIFACT INVENTORY

Site 6		Raw Material	Weight	Length	Width	Thickness	Commentary
Halted Biface	1		1.7g				(See Appendix I-2)
Hammerstone Fragment	1	Tan chert	70.3g				
Core (Utilized)	1	Tan chert	70.9g	71mm	52mm	20mm	
Wear Retouched Flake Tool	1	Tan chert	2.7g				
Ceramics	3		5.7g				(See Appendix I-3)
Thinning Flake (Interior)	1	Tan chert	1.0g				
Manuport Cobble (Unmodified)	1	Tan chert	156.8g				
TOTAL	9	Artifacts					

Site 7		Raw Material	Weight	Length	Width	Thickness	Commentary
Historic Artifacts	34						(See Appendix I-4)
Biface Fragment (Stage 4)	1	White chert	1.3g				
Wear Retouched Flake Tool	1	Tan chert	10.1g				
Ceramics	3		14.8g				(See Appendix I-3)
Clay lumps	2		19.8g				
Chunks	2	Ferruginous Sandstone	16.8g				
Unspecialized Flake (Secondary)	1	Pink (HT) chert	7.2g				
Flake Fragments (Interior)	2	(1Pink (HT) chert) (1Gray chert)	12.2g				
Shatter (Interior)	2	(1White chert) (1 Pink (HT) chert)	1.3g				
TOTAL	48	Artifacts					

Site 8		Raw Material	Weight	Length	Width	Thickness	Commentary
Halted Biface	1		4.2g				
Halted Endscraper	1	Gray chert	9.1g	39mm	26mm	10mm	Figure 23a
Ceramics	1		2.5g				(See Appendix I-3)
Intentionally Retouched Flake Tool	1	Pink (HT) chert	4.5g				Figure 23b
Pestal (Hammerstone?)	1	Sandstone	213.9g	66mm	44mm	40mm	Figure 24e
Thinning Flake	1	Pink (HT) chert	0.1g				
TOTAL	6	Artifacts					

Site 9		Raw Material	Weight	Length	Width	Thickness	Commentary
Chopper/Core/Hammerstone	1	Tan chert	206.8g	67mm	54mm	50mm	Figure 24b
Chopper/Core	1	Tan chert	205.8g	88mm	65mm	29mm	
Core (Utilized?)	1	Tan chert	65.0g	48mm	42mm	35mm	
Core	1	Tan chert	78.7g	62mm	40mm	37mm	
Abrader	1	Sandstone	449.7g	86mm	77mm	50mm	
Hammerstone Fragment	1	Quartz	24.5g				
Intentionally Retouched Flake Tool	1	Pink (HT) chert	6.7g				
Wear Retouched Flake Tool	1	Pink (HT) chert	2.7g				
Wear Retouched Flake Tool	1	Pink (HT) chert	1.2g				
Wear Retouched Flake Tool	1	Pink (HT) chert	0.2g				
Thinning Flakes	2	Pink (HT) chert	1.7g				
Unspecialized Flake (Primary)	1	Sandstone	4.8g				
Flake Fragment (Secondary)	1	Tan chert	33.9g				
Flake Fragments (Interior)	2	(1 Gray chert) (1 White chert)	2.3g				
Chunks	9	Ferruginous Sandstone	636.8g				
Cracked Rock	1		21.8g				
TOTAL	26	Artifacts					

TOTAL ARTIFACT INVENTORY

Site 10 Test Unit Artifacts		Raw Material	Weight	Length	Width	Thickness	Commentary
Level 1 (0-10 cm)							
Historic Artifacts	2						(See Appendix I-4)
Ceramics	2		9.7g				(See Appendix I-3)
Thinning Flake (Interior)	1	Tan chert	0.3g				
Flake Fragment (Interior)	1	Gray chert	0.2g				
Chunk	1	Ferruginous Sandstone	2.1g				
Clay lumps	2		0.4g				(See Appendix I-3)
TOTAL	7	Artifacts					

Site 10 Test Unit Artifacts		Raw Material	Weight	Length	Width	Thickness	Commentary
Level 2 (10-20 cm)							
Historic Artifacts	1						(See Appendix I-4)
Thinning Flakes (Interior)	2	Gray chert	0.6g				
Chunks	2	Ferruginous Sandstone	4.3g				
Clay lumps	3		0.4g				(See Appendix I-3)
TOTAL	8	Artifacts					

Site 10 Test Unit Artifacts		Raw Material	Weight	Length	Width	Thickness	Commentary
Level 3 (20-30 cm)							
Thinning Flakes (Interior)	2	(1 Gray chert) (1 Tan chert)	0.4g				
Chunk	1	Ferruginous Sandstone	0.2g				
Clay lumps	2		0.9g				(See Appendix I-3)
TOTAL	5	Artifacts					

Site 10 Test Unit Artifacts		Raw Material	Weight	Length	Width	Thickness	Commentary
Level 4 (30-40 cm)							
Thinning Flake (Interior)	1	Gray chert	0.4g				
TOTAL	1	Artifacts					

Site 10 Shove' Test 1 Artifacts		Raw Material	Weight	Length	Width	Thickness	Commentary
Ceramics	2		7.1g				(See Appendix I-3)
Clay lumps	2		0.3g				(See Appendix I-3)
TOTAL	4	Artifacts					

Site 10 Shovel Test 2 Artifacts		Raw Material	Weight	Length	Width	Thickness	Commentary
Thinning Flake (Interior)	1	Tan chert					
TOTAL	1	Artifacts					

Site 11		Raw Material	Weight	Length	Width	Thickness	Commentary
Historic Artifacts	48						(See Appendix I-4)
Abrader Fragment (?)	1	Ferruginous Sandstone	19.1g				
Ceramics	1		5.3g				(See Appendix I-3)
Flake Fragment (Interior)	1	Pink (HT) chert	1.0g				
Chunk	1	Ferruginous Sandstone	2.2g				
Shatter (1 Primary, 2 Interior)	3	(1Gray chert) (1 Pink (HT) chert) (1 White chert)	18.8g				
TOTAL	55	Artifacts					

TOTAL ARTIFACT INVENTORY

Site 12		Raw Material	Weight	Length	Width	Thickness	Commentary
Historic Artifacts	6						(See Appendix I-4)
Hafted Biface	1		6.2g				Figure 22g
Nutting/Hammerstone/Abrader	1	Ferruginous Sandstone	378.2g	75mm	71mm	35mm	
Nutting/Hammerstone	1	Ferruginous Sandstone	504.5g	107mm	90mm	35mm	Figure 24g
Abrader(?)	1	Ferruginous Sandstone	960.0g	147mm	105mm	46mm	
Abrader Fragment (Metate Fragment?)	1	Ferruginous Sandstone	228.9g				
Hammerstone Fragment	1	Quartz	246.6g				
Hammerstone Fragment	1		242.7g				
Hammerstone Fragment	1	Sand-Siltstone	170.8g				
Hammerstone Fragment	1	Sand-Siltstone	116.2g				
Hammerstone Fragment	1	Quartz	64.9g				
Core	1	Tan chert	143.8g	60mm	54mm	43mm	
Core	1	Pink (HT) chert	91.9g	55mm	40mm	33mm	
Ceramics	18		17.0g				(See Appendix I-3)
Biface Fragment	1	Pink (HT) chert	3.7g				
Biface Fragment	1	Gray chert	5.6g				
Biface Fragment	1	Pink (HT) chert	4.8g				
Biface Fragment	1	Gray chert	3.7g				
Biface Fragment	1	Gray chert	5.4g				
Biface Fragment	1	Gray chert	0.4g				
Biface Fragment	1	White chert	5.7g				
Intentionally Retouched Flake Tool	1	Gray chert	7.8g				
Intentionally Retouched Flake Tool	1	Pink (HT) chert	3.6g				
Wear Retouched Flake Tool	1	Pink (HT) chert	10.8g				
Wear Retouched Flake Tool	1	Quartz	22.1g				
Wear Retouched Flake Tool	1	Pink (HT) chert	7.2g				
Wear Retouched Flake Tool	1	Gray chert	2.9g				
Wear Retouched Flake Tool	1	Pink (HT) chert	1.0g				
Wear Retouched Flake Tool	1	Gray chert	0.8g				
Wear Retouched Flake Tool	1	Gray chert	0.5g				
Wear Retouched Flake Tool	1	Gray chert	0.6g				
Thinning Flakes (Interior)	6	(3 Pink (HT) chert) (3 Gray chert)	4.1g				
Unspecialized Flakes (1 Primary, 2 Interior)	3	Tan chert	43.4g				
Flake Fragments (1 Primary, 4 Interior)	5	(2 Gray chert) (1 Pink (HT) chert) (2 Tan chert)	6.1g				
Shatter (Interior)	11	(6 Gray chert) (4 Pink (HT) chert) (1 White chert)	37.0g				
Baked Clay Object Fragments	24		60.9g				(See Appendix I-3)
Chunks	27	Ferruginous Sandstone	817.0g				
Cracked Rocks	9		246.5g				
TOTAL	138	Artifacts					

Site 13		Raw Material	Weight	Length	Width	Thickness	Commentary
Historic Artifacts	8						(See Appendix I-4)
Wear Retouched Flake Tool	1	Pink (HT) chert	4.0g				
Ceramics	2		8.0g				(See Appendix I-3)
TOTAL	11	Artifacts					

Site 14 Shovel Test 1 Artifacts		Raw Material	Weight	Length	Width	Thickness	Commentary
Thinning Flake (Interior)	1	Gray chert	0.1g				
Clay lumps	1		0.3g				(See Appendix I-3)
Chunk	1	Ferruginous Sandstone	0.6g				
TOTAL	3	Artifacts					

TOTAL ARTIFACT INVENTORY

Site 14 Shovel Test 2 Artifacts		Raw Material	Weight	Length	Width	Thickness	Commentary
Ceramics	2		3.4g				(See Appendix I-3)
Clay lumps	3		2.4g				(See Appendix I-3)
Chunks	2	Ferruginous Sandstone	0.7g				
TOTAL	7	Artifacts					

Site 14 Shovel Test 3 Artifacts		Raw Material	Weight	Length	Width	Thickness	Commentary
Ceramics	4		5.9g				(See Appendix I-3)
Thinning Flakes (Interior)	3	(2 Gray chert) (1 Pink (HT) chert)	1.6g				
Flake Fragment (Secondary)	1	Tan chert	0.7g				
Clay lumps	3		1.3g				(See Appendix I-3)
Shatter (1 Secondary, 1 Interior)	4	(2 Gray chert) (2Pink (HT) chert)	2.4g				
Chunks	8	Ferruginous Sandstone	25.8g				
TOTAL	23	Artifacts					

Site 14 Shovel Test 4 Artifacts		Raw Material	Weight	Length	Width	Thickness	Commentary
Thinning Flake (Interior)	1	Gray chert	0.2g				
Flake Fragments (Interior)	2	Pink (HT) chert	0.4g				
Clay Chunks	2		0.7g				(See Appendix I-3)
Chunks	2	Ferruginous Sandstone	28.7g				
TOTAL	7	Artifacts					

Site 14 Shovel Test 6 Artifacts		Raw Material	Weight	Length	Width	Thickness	Commentary
Flake Fragment (Interior)	1	Gray chert	0.1g				
Clay lumps	4		5.3g				(See Appendix I-3)
TOTAL	5	Artifacts					

Site 14 Test Unit Artifacts		Raw Material	Weight	Length	Width	Thickness	Commentary
Level 1 (0-10 cm)							
Thinning Flakes (Interior)	2	Gray chert	0.2g				
Flake Fragments (Interior)	3	(2 Pink (HT) chert) (1 Tan chert)	1.1g				
Clay lumps	14		14.8g				(See Appendix I-3)
Cobble (Unmodified)	1	Chert	2.7g				
Shatter (Secondary)	1	Pink (HT) chert	0.6g				
Chunks	28	Ferruginous Sandstone	61.8g				
TOTAL	49	Artifacts					

Site 14 Test Unit Artifacts		Raw Material	Weight	Length	Width	Thickness	Commentary
Level 2 (10-20 cm)							
Wear Retouched Flake Tool	1	Gray chert	0.4g				
Thinning Flakes (Interior)	2	(1 Pink (HT) chert) (1 Gray chert)	0.4g				
Flake Fragments (Interior)	2	(1 Pink (HT) chert) (1 Tan chert)	1.8g				
Clay lumps	9		11.8g				(See Appendix I-3)
Charcoal	3		0.2g				
TOTAL	17	Artifacts					

TOTAL ARTIFACT INVENTORY

Site 14 Test Unit Artifacts		Raw Material	Weight	Length	Width	Thickness	Commentary
Level 3 (20-30 cm)							
Thinning Flakes (Interior)	7	(2 Gray chert) (3 Pink (HT) chert) (2 Tan chert)	7.2g				
Flake Fragments (Interior)	4	(2 Gray chert) (1 Pink (HT) chert) (1 Tan chert)	1.4g				
Clay lumps	8		6.2g				(See Appendix I-3)
Shatter (Interior)	1	White chert	0.5g				
Chunks	20	Ferruginous Sandstone	23.2g				
TOTAL	40	Artifacts					

Site 14 Test Unit Artifacts		Raw Material	Weight	Length	Width	Thickness	Commentary
Level 4 (30-40 cm)							
Flake Fragment (Interior)	1	Gray chert	0.2g				
Clay lumps	4		6.9g				(See Appendix I-3)
Chunks	5	Ferruginous Sandstone	14.5g				
TOTAL	10	Artifacts					

Site 14 Test Unit Artifacts		Raw Material	Weight	Length	Width	Thickness	Commentary
Level 5 (40-50 cm)							
Flake Fragment (Interior)	1	Gray chert	0.2g				
Clay lump	1		0.5g				(See Appendix I-3)
Shatter (Interior)	1	Gray chert	3.0g				
Chunks	2	Ferruginous Sandstone	0.7g				
TOTAL	5	Artifacts					

Site 40 WK 9		Raw Material	Weight	Length	Width	Thickness	Commentary
Intentionally Retouched Flake Tool	1	Tan chert	28.0g				
Wear Retouched Flake Tool	1	Pink (HT) chert	0.5g				
Wear Retouched Flake Tool	1	Gray chert	0.6g				
Hammerstone/Abrader Fragment	1	Quartz	138.7g				
Hammerstone Fragment	1	Sandstone	72.7g				Figure 24j
Chopper (?)	1	Chert	72.8g	68mm	43mm	24mm	
Core (Exhausted)	1	White chert	45.8g				
Biface Fragment	1	Pink (HT) chert	0.1g				
Intentionally Retouched Flake Tool	1	Quartzite	1.8g				
Bifacial Thinning Flakes	6	(2 Pink (HT) chert) (3 Gray chert) (1 Orthoquartzite	3.8g				
Unspecialized Flakes (1 Interior, 1 Secondary, 1 Primary)	3	Tan chert	84.5g				
Flake Fragments (4 Interior, 1 Secondary)	5	(2 Pink (HT) chert (2 Gray chert) (1 White chert)	7.9g				
Clay ball fragment?	1		2.1g				(See Appendix I-3)
Shatter (4 Interior, 2 Secondary)	6	(2 Pink (HT) chert) (3 Gray chert) (1 Orthoquartzite)	9.3g				
Chunks	4	Ferruginous Sandstone	65.7g				
Cracked Rock	2	Pink (HT) chert	105.2g				
TOTAL	36	Artifacts					

TOTAL ARTIFACT INVENTORY

Site 40 WK 10		Raw Material	Weight	Length	Width	Thickness	Commentary
Halted Bifaces	9	(3 Tan chert) (2 Gray chert) (4 Pink (HT) chert)					(See Appendix I-2)
Halted Endscraper	1	Pink (HT) chert	17.3g	46mm	29mm	13mm	Figure 23e
Halted Endscraper	1	White chert	16.7g	38mm	28mm	15mm	Figure 23d
Halted Endscraper (Graver/Burrin?)	1	Pink (HT) chert	4.8g	30mm	25mm	7mm	Figure 23c
Halted Endscraper	1	Pink (HT) chert	1.5g	22mm	19mm	4mm	Figure 23g
Celt (Woodworking Tool?)	1	Pink (HT) chert	25.0g	61mm	27mm	13mm	Figure 22q
Chopper (Bifacial)	1	Tan chert	162.7g	71mm	67mm	29mm	Figure 24c
Intentionally Retouched Flake Tool	1	Pink (HT) chert	17.3g	59mm	31mm	11mm	
Intentionally Retouched Flake Tool	1	Pink (HT) chert	4.0g				Figure 23l
Intentionally Retouched Flake Tool	1	Pink (HT) chert	12.7g				Figure 23l
Intentionally Retouched Flake Tool	1	White chert	10.1g				
Intentionally Retouched Flake Tool	1	Tan chert	11.8g				
Wear Retouched Flake Tool	1	Pink (HT) chert	22.7g				
Wear Retouched Flake Tool	1	Pink (HT) chert	3.0g				
Wear Retouched Flake Tool	1	Tan chert	12.2g				
Wear Retouched Flake Tool	1	Pink (HT) chert	2.9g				
Wear Retouched Flake Tool	1	Pink (HT) chert	0.2g				
Wear Retouched Flake Tool	1	Pink (HT) chert	1.4g				
Wear Retouched Flake Tool	1	Pink (HT) chert	0.9g				
Wear Retouched Flake Tool	1	Tan chert	1.1g				
Wear Retouched Flake Tool	1	Pink (HT) chert	7.1g				
Wear Retouched Flake Tool	1	Tan chert	2.6g				
Biface	1	Pink (HT) chert	30.3g	56mm	37mm	16mm	Figure 22r
Biface Fragment	1	Pink (HT) chert	16.7g				
Biface Fragment	1	Pink (HT) chert	6.1g				
Biface Fragment	1	Pink (HT) chert	5.3g				
Biface Fragment	1	Tan chert	19.9g				
Biface Fragment	1	Gray chert	5.9g				
Biface Fragment	1	Pink (HT) chert	1.0g				
Ceramics	30		68.8g				(See Appendix I-3)
Nutting/Hammerstone/(Abrader?)	1	Sandstone	328.7g	93mm	75mm	40mm	
Hammerstone/Core	1	Tan chert	151.4g				
Hammerstone (Chopper?)	1	Chert	271.8g	83mm	71mm	42mm	
Hammerstone	1	Quartz	393.2g	82mm	66mm	50mm	
Abrader	1	Ferruginous Sandstone	408.5g	90mm	64mm	59mm	
Abrader	1	Ferruginous Sandstone	71.5g	44mm	40mm	34mm	
Thinning Flakes (17 Interior, 5 Secondary)	22	(4 Gray chert) (6 Pink (HT) chert) (4 White chert) (8 Tan chert)	45.3g				
Unspecialized Flakes (2 Interior, 2 Secondary)	4	(2 Pink (HT) chert) (2 Tan chert)	15.8g				
Flal Fragments (17 Interior, 3 Secondary)	20	(2 Gray chert) (6 Pink (HT) chert) (1 White chert) (11 Tan chert)	19.1g				
Shatter (15 Interior, 2 Secondary)	17	(3 Gray chert) (3 Pink (HT) chert) (7 White chert) (4 Tan chert)					
Clay lumps	3		8.3g				(See Appendix I-3)
Chunks	6	Ferruginous Sandstone	256.4g				
Cracked Rock	10		363.3g				
TOTAL	155	Artifacts					

Site 40 WK 10A		Raw Material	Weight	Length	Width	Thickness	Commentary
Historic Artifacts	1						(See Appendix I-4)
Halted (?) Tool	1	Tan chert	8.4g	32mm	27mm	10mm	
Wear Retouched Flake Tool	1	Tan chert	3.5g				
Ceramics	2		10.1g				(See Appendix I-3)
Core (Exhausted)	1	Pink (HT) chert	17.7g				
Thinning Flake (Interior)	1	Tan chert	4.8g				
TOTAL	7	Artifacts					

TOTAL ARTIFACT INVENTORY

Site 40 WK 11		Raw Material	Weight	Length	Width	Thickness	Commentary
Historic Artifacts	6						(See Appendix I-4)
Chopper/Core	1	Tan chert	395.6g	78mm	76mm	50mm	Figure 24c
Nutting/ Hammerstone	1	Ferruginous Sandstone	411.7g	93mm	78mm	33mm	Figure 24l
Hammerstone (Abrader?)	1	Chert	702.9g	113mm	82mm	46mm	
Hammerstone/Abrader	1	Quartz	186.2g				
Hammerstone Fragment	1	Quartz	22.7g				
Hammerstone Fragment	1	Tan/Gray Banded chert	61.4g				
Abrader Fragment	1	Ferruginous Sandstone	152.8g				
Biface Fragment	1	Gray chert	0.6g				
Bifacial Thinning Flake (Interior)	1	Pink (HT) chert	0.7g				
Flake Fragments (Interior)	2	(1 Gray chert) (1Tan chert)	2.6g				
Chunks	5	Ferruginous Sandstone	251.3g				
TOTAL	22	Artifacts					

Site 40 WK 14		Raw Material	Weight	Length	Width	Thickness	Commentary
Historic Artifacts	31						(See Appendix I-4)
Flake Fragment (Primary)	1	Sandstone	12.4g				
Chunk	1	Ferruginous Sandstone	21.7g				
Chunk	1	Limestone	44.7g				
TOTAL	34	Artifacts					

Site 40 GB 41		Raw Material	Weight	Length	Width	Thickness	Commentary
Historic Artifacts	2						(See Appendix I-4)
Hafted Bifaces	7						(See Appendix I-2)
Obtuse Angle Flake Tool	1	White chert	14.6g				
Intentionally Retouched Flake Tool	1	Pink (HT) chert	13.7g				
Intentionally Retouched Flake Tool	1	Pink (HT) chert	3.5g				
Intentionally Retouched Flake Tool	1	Pink (HT) chert	6.2g				
Intentionally Retouched Flake Tool	1	Tan chert	3.9g				
Intentionally Retouched Flake Tool	1	Pink (HT) chert	3.6g				
Intentionally Retouched Flake Tool	1	Pink (HT) chert	1.1g				
Intentionally Retouched Flake Tool	1	Pink (HT) chert	0.3g				
Wear Retouched Flake Tool	1	Pink (HT) chert	3.4g				
Wear Retouched Flake Tool	1	Gray chert	5.1g				
Wear Retouched Flake Tool	1	Pink (HT) chert	5.4g				
Wear Retouched Flake Tool	1	Tan chert	3.5g				
Wear Retouched Flake Tool	1	White chert	1.6g				
Wear Retouched Flake Tool	1	Gray chert	2.1g				
Wear Retouched Flake Tool	1	Gray chert	1.1g				
Wear Retouched Flake Tool	1	Gray chert	0.6g				
Wear Retouched Flake Tool	1	Gray chert	0.5g				
Wear Retouched Flake Tool	1	Pink (HT) chert	0.8g				
Wear Retouched Flake Tool	1	Pink (HT) chert	0.4g				
Wear Retouched Flake Tool	1	Pink (HT) chert	0.2g				
Wear Retouched Flake Tool	1	Pink (HT) chert	0.6g				
Wear Retouched Flake Tool	1	Gray chert	0.5g				
Wear Retouched Flake Tool	1	Pink (HT) chert	0.4g				
Wear Retouched Flake Tool	1	Pink (HT) chert	0.1g				
Wear Retouched Flake Tool	1	Tan chert	36.9g				
Wear Retouched Flake Tool	1	White chert	15.5g				
Wear Retouched Flake Tool	1	Pink (HT) chert	3.6g				
Wear Retouched Flake Tool	1	Gray chert	0.1g				
Wear Retouched Flake Tool	1	Pink (HT) chert	1.0g				
Biface	1	Tan chert	43.2g	57mm	36mm	29mm	
Biface	1	Pink (HT) chert	23.6g	73mm	34mm	11mm	
Biface Fragment	1	Tan chert	9.0g				
Biface Fragment	1	Gray chert	2.3g				
Biface Fragment	1	Gray chert	0.7g				
Biface Fragment	1	Gray chert	1.3g				
Biface Fragment	1	Pink (HT) chert	0.3g				
Biface Fragment	1	Gray chert	0.8g				
Biface Fragment	1	Tan chert	2.9g				
Hammerstone Fragment	1	Sandstone	75.2g				

TOTAL ARTIFACT INVENTORY

Site 40GB41 (Continued)		Raw Material	Weight	Length	Width	Thickness	Commentary
Hammerstone Fragment	1	White chert	47.9g				
Hammerstone Fragment	1	White chert	19.4g				
Abrader	1	Ferruginous Sandstone	104.0g				
Abrader (?) Fragment	1	Ferruginous Sandstone	21.8g				
Core (Exhausted)	1	White chert	47.7g				
Core (Exhausted)	1	Tan/Gray Banded chert	35.1g				
Core (Exhausted)	1	Tan chert	13.7g				
Core (Exhausted)	1	Pink (HT) chert	14.9g				
Ceramics	19		89.4g				(See Appendix 3)
Thinning Flakes (Interior)	40	(2 Orthoquartzite) (13 Gray chert) (17 Pink (HT) chert) (8 Tan chert)	52.2g				
Unspecialized Flakes (3 Primary, 2 Secondary, 1Interior)	6	(2 Pink (HT) chert) (4 Tan chert)	69.7g				
Flake Fragments (1 Primary, 2 Secondary, 29 Interior)	32	(8 Gray chert) (11 Pink (HT) chert) (10 Tan chert) (3 White chert)	52.3g				
Shatter (2 Primary, 9 Interior)	11	(4 Gray chert) (2 Pink (HT) chert) (2 Tan chert) (1 White chert) (1 Quartz) (1 Orthoquartzite)	71.1g				
Clay lumps	11		12.6g				
Bone Fragments (4 Burnt)	17		16.6g				
Shell Fragments (~~Oyster?~~)	5		3.7g				
Charcoal	1		0.2g				
Chunks	28	Ferruginous Sandstone	271.5g				
Cracked Rock	20		212.9g				
TOTAL	244	Artifacts					

Site 40 GB 41 Shovel Test 1 Artifacts		Raw Material	Weight	Length	Width	Thickness	Commentary
Ceramics	2		2.1g				(See Appendix I-3)
Clay lumps	16		11.7g				(See Appendix I-3)
Shell	1		0.2g				
Bone Fragments	22		4.1g				
Thinning Flakes (Interior)	3	(1 Pink (HT) chert) (1 Gray chert) (1 Tan chert)	0.9g				
Flake Fragments (Interior)	2	(1 Gray chert) (1 Pink (HT) chert)	0.4g				
Shatter (1 Secondary, 4 Interior)	5	(3 Gray chert) (2 Pink (HT) chert)	6.0g				
TOTAL	51	Artifacts					

Isolated Find 1		Raw Material	Weight	Length	Width	Thickness	Commentary
Shatter (Interior)	1	Gray chert	0.2g				
TOTAL	1	Artifacts					

Isolated Find 2		Raw Material	Weight	Length	Width	Thickness	Commentary
Historic Artifacts	12						(See Appendix I-4)
TOTAL	12	Artifacts					

TOTAL ARTIFACT INVENTORY

Isolated Find 3		Raw Material	Weight	Length	Width	Thickness	Commentary
Intentionally Retouched Flake Tool	1		0.5g				
Chunk	1	Ferruginous Sandstone	12.1g				
Manuport (Unmodified Cobble)	1	Tan chert	4.9g				
Thinning Flake (Interior)	1	Pink (HT) chert	0.4g				
Flake Fragment (Interior)	1	Gray chert	0.4g				
TOTAL	5	Artifacts					

Isolated Find 4		Raw Material	Weight	Length	Width	Thickness	Commentary
Nutting/Hammerstone	1	Ferruginous Sandstone	354.0g	90mm	61mm	43mm	Figure 24m
Hammerstone	1	Sandstone	193.1g	67mm	55mm	41mm	
TOTAL	2	Artifacts					

Isolated Find 5		Raw Material	Weight	Length	Width	Thickness	Commentary
Flake Fragment (Secondary)	1	Tan chert	36.1g				
TOTAL	1	Artifacts					

Isolated Find 6		Raw Material	Weight	Length	Width	Thickness	Commentary
Historic Artifacts	6						(See Appendix I-4)
Core	1	Tan chert		45mm	32mm	19mm	
TOTAL	7	Artifacts					

Provenience	Blade X-Section	Blade shape	Blade Edge	Shoulder	Haft Type	Basal Stem Edge	Condition	Haft Grinding	Cortex	Material	Heat Treatment	Type	Comment
Site 1 #1	Flattened	Excurv/Incur.	Even Bifacial	Barbed	Expanded	Irregular	Whole	Absent	None	Gray Chert	No	McIntire?	Figure 22a
Site 1 #2	Flattened	Straight	Even Bifacial	Barbed	Straight	Excurv/Convex	Whole	Absent	None	Gray chert	No	Mabin?	Figure 22b
Site 2 #1	Plano-Convex		Even Bifacial	Horizontal	Rounded Stem	Excurv/Convex	Base & Shoulder	Absent	None	Gray chert	No	Whitlock?	Figure 22c
Site 6 #1	Biconvex		Even Bifacial		Triangular	Straight	Base	Absent	None	White chert	No		Figure 22e
Site 8 #1				Barbed	Corner Notch		Partial should.	Absent	None	Gray chert	No	Kirk?	Figure 22j
Site 12 #1	Flattened		Even Bifacial	Rounded			Midsection		None	Chert	Heated (Int?)	Eva?	Figure 22g
40WK10 #1	Biconvex		Even Bifacial	Expanded	Rounded	Excurv/Convex	Tip missing	Absent	None	Gray chert	No	drill	Figure 22h
40WK10 #2	Flattened		Even Bifacial	Barbed	Basal Notched		Midsection		None	Tan chert	Indeterminate		
40WK10 #3	Plano-Convex	Parallel	Even Bifacial	Tapered	Corner Notch	Incurv/Concave	Whole	Absent	Minor	Tan chert	No	McIntire?	Figure 22o
40WH10 #4					Expanded	Straight	Base fragment	Absent	None	Gray chert	No		Figure 22f
40WK10 #5	Plano-Convex		Even Bifacial	Rounded	Straight Stem	Incurv/Concave	Tip missing	Absent	None	Pink chert	Heated (Int?)	Benton	Figure 22n
40WK10 #6	Biconvex	Straight	Unifacial?	Expanded	Side Notched	Excurv/Convex	Whole	Basal Margin	None	Tan chert	No	endscraper	Figure 22k
40WK10 #7	Plano-Convex	Straight	Even Bifacial	Barbed	Basal Notched	Excurv/Convex	Whole	Absent	None	Tan chert	No	Eva	Figure 22p
40WK10 #8	Biconvex	Straight	Even Bifacial	Irregular	Corner Notch	Straight	Whole	Minimal/base	None	Tan chert	No	Kirk	Figure 22t
40WK10 #9	Flattened	Straight	Even Bifacial	Expanded	Straight	Incurv/Concave	Whole	Basal Margin	None	Black chert	No	Benton	Figure 22m
40GB41 #1	Flattened	Parallel	Even Bifacial				Base Missing		None	White chert	No		
40GB41 #2	Biconvex		Even Bifacial	Expanded	Expended	Straight	Tip Missing	Absent	None	Gray chert	No	Flint Creek	Figure 22s
40GB41 #3	Irregular	Parallel	Beveled	Tapered	Side Notched	Excurv/Convex	Whole	Minimal/base	None	Gray chert	No	Bakers Creek	Figure 22d
40GB41 #4	Flattened		Even Bifacial	Expanded	Straight	Straight	Whole	Absent	None	Gray chert	No	endscraper	Figure 22l
40GB41 #5	Biconvex	Irregular	Even Bifacial	Expanded	Contracted	Straight	Tip missing		None	Tan chert	No	drill	Figure 22i
40GB41 #6					Expanded	Straight	Base	Absent	None	Tan chert	No		
40GB41 #7				Expanded	Straight	Irregular	Base & Shoulder	Absent	None	Pink chert	Yes (Int)		

Provenience	Max. Length	Max. Width	Max. Thick.	Should. Width	Blade Length	Haft Length	Max. Width	Dist. Haft Wth	Prox. Haft Wth	Haft Thickness	Basal Conc. Dept	Weight	Edge Angles
Site 1 #1	37	28	9	28	16	14	21	21	25	18		7.4g	59, 60
Site 1 #2	29	23	6	23	18	13	16	14	15	5		3.2g	66, 66
Site 2 #1		23	8	20		13		13	14	7		4.4g	58, 59
Site 6 #1		18	6						1.7			1.7g	61, 62
Site 8 #1												4.2g	84
Site 12 #1		27	8	27			22			7		6.2g	60, 62
40WK10 #1			8			9	10	17	10	7		4.9g	78, 76
40WK10 #2			7							6		5.6g	56, 58
40WK10 #3	64	34	10	33	56	9	29	22	22	8	1	18.4g	50, 51
40WK10 #4						13		17	20	5		2.0g	61, 64
40WK10 #5		27	10	26		10	22	23	20	8	1	10.5g	63, 65
40WK10 #6	21	25	8	24	14	11	15	22	25	8		4.6g	62, 63
40WK10 #7	41	33	8	33	42	6	25	15	4	5		8.6g	55, 67
40WK10 #8	40	30	10	29	32	11	22	24	25	8		10.3g	58, 59
40WK10 #9	42	25	10	25	29	11	22	21	18	9	1	9.9g	62, 66
40GB41 #1		29	7		33		24					6.8g	60, 61
40GB41 #2		27	12	27		19	21	22	20	11		19.4g	68, 71
40GB41 #3	31	16	7	16	23	9	13	10	14	6		3.5g	66, 68
40GB41 #4	15	23	6	23		8		20	20	6		2.2g	62, 62
40GB41 #5		22	14	22		13	13	17	12	12		9.3g	85, 87
40GB41 #6									18			1.5g	62, 65
40GB41 #7						15			17			5.7g	68, 72

OBION RIVER SURVEY PREHISTORIC CERAMIC ARTIFACTS

Site 1	Description	Commentary
	1 Fabric Impressed grog tempered sherd	
	1 Unidentified grog tempered sherd	
TOTAL	2 Artifacts	

Site 4	Description	Commentary
Artifact #12	1 Unidentified (cross cord marked?) grog tempered sherd	Figure 23o
TOTAL	1 Sherd	

Site 4	Description	Commentary
Test Unit 1		
10-20 cm	1 Unidentified clay lump (0.9 grams)	Non-cultural?
TOTAL	1 Artifact (?)	

Site 5A	Description	Commentary
	1 Unidentifiable grog tempered sherd (very fine grog <0.2mm)	
TOTAL	1 Artifact	

Site 6	Description	Commentary
	2 Unidentifable grog tempered sherds (cord marked?)	
	1 Cord marked, grog tempered sherds (Parallel cords ca. 3 mm diameter)	
TOTAL	3 Artifacts	

Site 7	Description	Commentary
	1 Cane punctated baked clay object fragment (17.7g)	Figure 23p
	1 Possible baked clay object fragment	
	1 Unidentifiable grog tempered sherd	
	1 Plain grog tempered sherd	
	1 Possible check or punctated grog tempered sherd	Figure 23q
TOTAL	5 Artifacts	

Site 8	Description	Commentary
	1 Unidentifable grog tempered sherd (brushed?) w/medium grog >0.5 mm	
TOTAL	1 Artifact	

Site 10	Description	Commentary
Test Unit 1		
Level 1	1 Unidentifiable grog tempered sherd	
(0 - 10 cm)	1 Fabric Marked grog tempered sherd (medium grog >0.2 mm w/fine sand)	
	2 Unidentifiable clay lumps (0.4g)	Non-cultural?
TOTAL	4 Artifacts (?)	

Site 10	Description	Commentary
Test Unit 1		
Level 2		
(10 - 20 cm)	3 Unidentifiable clay lumps (0.4g)	Non-cultural?
TOTAL	3 Artifacts (?)	

OBION RIVER SURVEY PREHISTORIC CERAMIC ARTIFACTS

Site 10	Description	Commentary
Test Unit 1		
Level 3		
(20 - 30 cm)	2 Unidentifiable clay lumps (0.9g)	Non-cultural?
TOTAL	2 Artifacts (?)	

Site 10	Description	Commentary
Shovel Test 1		
	1 Cord marked grog tempered sherd (par. cord ca. 2 mm diameter)	Figure 23n
	2 Unidentifiable clay lumps (0.9g)	Non-cultural?
TOTAL	2 Artifacts (?)	

Site 11	Description	Commentary
	1 Unidentified grog tempered sherd	
TOTAL	1 Sherd	

Site 12	Description	Commentary
	24 Baked clay object fragments	6 w/cane punctations
	10 Unidentifiable grog tempered sherds	
	1 Cord marked grog tempered sherd (parallel cord impressions ca. 2 mm dia.)	
	3 Plain grog tempered sherds	
	1 Plain grog tempered sherd w/extensive fine sand	
	2 Fabric marked grog tempered sherds	
	1 Possible punctated grog tempered sherd	
TOTAL	42 Artifacts	

Site 13	Description	Commentary
	1 Plain grog tempered sherd (med grog > 2 mm)	
	1 Irregular check or dentate stamped, grog tempered sherd (med. grog > 2 mm)	
TOTAL	2 Artifacts	

Site 14	Description	Commentary
Shovel Test 1		
	1 Unidentifiable clay lump (0.3g)	Non-cultural?
TOTAL	1 Artifacts (?)	

Site 14	Description	Commentary
Shovel Test 2		
	1 Unidentifiable grog tempered sherd w/extensive fine sand	
	1 Plain grog tempered sherd (medium grog >0.2 mm w/extensive fine sand)	
	2 Unidentifiable clay lumps (0.4g)	Non-cultural
	1 Possible clay ball fragment (2.0g)	
TOTAL	4 Artifacts	

Site 14	Description	Commentary
Shovel Test 3		
	3 Unidentifiable grog tempered sherds (med. grog >2 mm)	
	1 Plain grog tempered sherd (medium grog >0.2 mm w/ fine sand-grit)	
	3 Unidentifiable clay lumps (1.3g)	Non-cultural?
TOTAL	7 Artifacts (?)	

Site 14	Description	Commentary
Shovel Test 4		
	2 Unidentifiable clay lumps (0.7g)	Non-cultural?

TOTAL	2 Artifacts (?)	

Site 14	Description	Commentary
Test Unit 1		
Level 1	1 Possible baked clay object fragment (7.2g)	Undecorated
(0-10 cm)	13 Unidentifiable clay lumps (7.6g)	Non-cultural?
TOTAL	14 Artifacts (?)	

Site 14	Description	Commentary
Test Unit 1		
Level 2		
(10 - 20 cm)	9 Unidentifiable clay lumps (11.8g)	Non-cultural?
TOTAL	11 Artifacts (?)	

Site 14	Description	Commentary
Test Unit 1		
Level 3		
(20 - 30 cm)	8 Unidentifiable clay lumps (6.2g)	Non-cultural?
TOTAL	8 Artifacts (?)	

Site 14	Description	Commentary
Test Unit 1		
Level 4		
(30 - 40 cm)	4 Unidentifiable clay lumps (6.9g)	Non-cultural?
TOTAL	4 Artifacts (?)	

Site 14	Description	Commentary
Test Unit 1		
Level 5		
(40 - 50 cm)	1 Unidentifiable clay lumps (0.5g)	Non-cultural?
TOTAL	1 Artifact (?)	

Site 40WK9	Description	Commentary
	1 Unidentifiable clay lump, medium grog tempered (2.1g)	Clay object fragment?
TOTAL	1 Artifact (?)	

Site 40WK10	Description	Commentary
	1 Cord marked fine grog (<2 mm) sherd (par. cord impresions ca. 4 mm dia.)	Figure 23s
	1 Cord marked fine grog (<2 mm) sherd (cross cord impresions ca. 4mm dia.)	
	3 Cord marked (?) fine grog (<2 mm) tempered sherds	(Indistinct)
	2 Plain med. grog (>2 mm) tempered sherds	
	1 Plain fine grog(<2 mm) tempered sherd	
	5 Fabric marked coarse (>2 mm) grog tempered sherd	
	17 Unidentiable grog tempered sherds, 4 w/extensive fine sand	
	3 Unidentifiable clay lumps, medium grog tempered (8.3g)	Clay object frags?
TOTAL	33 Artifacts	

Site 40WK10A	Description	Commentary
	2 Unidentifiable grog tempered sherds	(one cord marked?)
TOTAL	2 Artifacts (?)	

Site 40GB41	Description	Commentary
	2 Cord marked med. grog (>2 mm) sherds (par. cord impr. ca. 4 mm dia.)	Figure 23r,t
	1 Cord marked med. grog (>2 mm) sherd (cross cord impr. ca. 2 mm dia.)	Furrs cord marked?
	1 Fabric marked med. grog (>2 mm) sherds, rigid warp	Figure 23u
	6 Plain med. grog (>2 mm) tempered sherds	
	4 Fabric marked med. (>2 mm) grog w/fine sand tempered sherds, rigid warp	"Tshmingo"?
	5 Unidentiable grog tempered sherds	
	10 Baked clay object fragments, 1 w/cane punctations	
	1 Unidentifiable clay lump, possible daub fragment	Figure 24k
TOTAL	30 Artifacts	

Site 40GB41	Description	Commentary
Shovel Test 1		
	5 Unidentifiable clay lumps (2.3g)	
	2 Unidentifiable grog tempered sherds	
TOTAL	7 Artifacts (?)	

Site 2	Description	Commentary
	1 Unidentified iron fragment	
TOTAL	1 Artifact	

Site 5	Description	Commentary
	1 Flat iron (possible pot fragment?)	
	1 Clear glass cosmetic bottle fragment	
	1 Undecorated white-bodied ironstone sherd	
	1 White-bodied ironstone sherd w/faint beaded molding on rim	
	2 Albany slip buff-colored earthenware sherds	
TOTAL	6 Artifacts	

Site 5A	Description	Commentary
	2 Clear glass bottle fragments	
TOTAL	2 Artifacts	

Site 7	Description	Commentary
	1 Unglazed porcelain figurine or doll fragment	
	1 Undecorated white-bodied ironstone sherd	
	2 Stoneware sherds w/blue slip on exterior rim and white slip interior	
	1 Iron lock fragment	
	4 Aqua glass bottle fragments	Figure 23v
	1 Aqua glass jar fragment	
	1 Clear glass bottle fragment	
	1 Amber glass bottle fragment	
	1 Brown glass bottle fragment	
	2 Milk glass canning jar closures	
	1 White-bodied ironstone sherd with flow-blue (Revival) decoration	
	7 Undecorated white ironstone sherds	
	1 Panal molded undecorated white-bodied ironstone sherd	
	1 Plain hard paste porcelain sherd	
	5 Albany slip glazed buff colored earthenware sherds	
	1 Albany slip glazed stoneware sherd	
	1 Gray salt glazed stoneware sherd w/buff interior	
	1 Unglazed porcelain doll left arm	Figure 23z
	1 Clear press glass tableware sherd	
TOTAL	34 Artifacts	

Site 10	Description	Commentary
Test Unit 1		
0-10 cm	1 Shotgun shell ("Western No. 12 Field")	
	1 Wire nail fragment	
TOTAL	2 Artifacts	

Site 10	Description	Commentary
Test Unit 1		
10-20 cm	1 Wire nail fragment	
TOTAL	1 Artifact	

OBION RIVER SURVEY HISTORIC ARTIFACTS

Site 11	Description	Commentary
	1 Glass marble	
	1 Stoneware churn top	
	10 Burned ceramic fragments	
	3 Milk glass canning jar sealers	
	3 Milk glass table vessel fragments	
	1 Milk glass cosmetic jar fragment	
	3 Undecorated white-bodied ironstone sherds	
	1 Undecorated white-bodied ironstone sherd w/green transfer makers mark	
	6 Burned glass fragments	
	1 Clear glass machine made bottle neck	
	5 Clear glass bottle glass fragments	
	1 Aqua/green canning jar fragment	
	1 Aqua/green bottle fragment	
	1 Hard paste porcelain sherd, hand painted w/luster wash	
	1 Albany slip glazed buff colored earthenware sherd	
	1 Porcelain house electric insulator	
	1 Coal fragment	
	1 Rubber fragment	
	1 Slate fragment	
	1 Large iron bolt fragment	
	3 Unidentified iron fragments	
	1 Brick fragment	
TOTAL	48 Artifacts	

Site 12	Description	Commentary
	2 Undecorated white-bodied ironstone sherds	
	1 Undecorated blue-bodied ironstone sherd	
	1 Burned glass fragment	
	1 Clear glass bottle glass fragment	
	1 Light green crown glass fragment	
TOTAL	6 Artifacts	

Site 13	Description	Commentary
	2 Undecorated white-bodied ironstone sherds	
	1 Undecorated white-bodied ironstone sherd w/maker's mark ("Johnson")	
	1 Burned glass fragment	
	1 Clear glass tumbler glass fragment	
	1 Lavender ornamental glass fragment	
	2 Aqua/green canning jar fragments (Mason jars)	
TOTAL	8 Artifacts	

Site 40WK10A	Description	Commentary
	1 Cobalt blue glass fragment	
TOTAL	1 Artifact	

Site 40WK11	Description	Commentary
	2 Undecorated white-bodied ironstone sherds	
	1 Amathyst-colored glass bottle glass fragment	
	3 Albany slip on buff-colored earthernware sherds	
TOTAL	6 Artifacts	

OBION RIVER SURVEY HISTORIC ARTIFACTS

Site 40WK14	Description	Commentary
	1 Bone lice comb fragment	
	2 Green crown window glass	
	1 Burned glass fragments	
	1 Cobalt blue glass bottle fragment	
	2 Milk glass canning jar clo.ures	
	2 Light green bottle glass fragments	
	12 Undecorated white-bodied ironstone sherds	
	1 Undecorated white-bodied ironstone sherd w/possible makers mark	
	1 Hard paste porcelain hand painted or decal sherd, probably Japanese	Figure 23w
	1 Unglazed porcelain figurine fragment	
	1 Decal decorated white-bodied ironstone sherd	
	1 Salt glazed stoneware churn lid fragment	
	1 Unidentified iron fragment	
	1 Green transfer print sherd (late?)	
	1 Black/gray transfer print (late?)	
	1 Blue transfer print (late?)	
	1 Stoneware w/light blue interior and exterior slip	
TOTAL	31 Artifacts	

Site 40GB41	Description	Commentary
	1 Burned glass fragment	
	1 Clear glass bottle fragment	
TOTAL	2 Artifacts	

Isolated Find 2	Description	Commentary
	1 Aqua/green bottle glass sherd	
	1 Green crown window glass	
	1 Burned glass fragment	
	1 Clear molded glass bottle fragment	
	1 Depression glass table ware fragment (?)	Figure 23x
	1 Undecorated white-bodied ironstone sherd	
	1 Decal decorated white-bodied ironstone sherd	Figure 23bb
	2 Albany slip glazed buff colored earthenware	
	1 Unglazed tile/pipe fragment	
	1 Molded Depression table glass fragment	Figure 23y
	1 Decal decorated white-bodied ironstone sherd	Figure 23aa
TOTAL	12 Artifacts	

Isolated Find 6	Description	Commentary
	1 Possible stoneware sherd w/blue slip exterior & white slip interior	
	4 brick fragments (machine cut?)	
TOTAL	5 Artifacts	

APPENDIX II.

PROJECT CORRESPONDANCE

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PROJECT CORRESPONDENCE

16 December 1986	Clinton Hopkins, Memphis COE	Notified us of contract award
22 December 1986	Dr. John Foss, Knoxville, Tennessee	Wrote him about the start of work
22 December 1986	Mr. Nick Fielder, Tennessee State Archaeologist, Nashville	Called to set up appointment
22 December 1986	Dr. Gerald Smith, Memphis State	Wrote asking about his work in area
22 December 1986	Dr. R. Barry Lewis, University of Illinois, Urbana-Champagne	Wrote asking about his work in area
22 December 1986	Dr. Robert Mainfort, Pinson Mounds	Wrote asking about his work in area
23 December 1986	Mr. Nick Fielder, Ms Patti Coates, Tennessee Division of Archaeology	Visited their office, examined files
3 January 1987	Mr. Douglas Prescott, Memphis COE	Mailed monthy progress report
3 February 1987	Mr. Douglas Prescott, Memphis COE	Mailed monthy progress report, Management Summary
10 March 1987	Dr. Robert Mainfort, Pinson Mounds	Sent us a copy of Dye's Mud Creek Report
11 March 1987	Mr. Nick Fielder, Tennessee State Archaeologist, Nashville	Called to ask about about site numbers.
12 March 1987	Mr. Douglas Prescott, Memphis COE	Called him about submission of draft; mailed monthly progress report.

APPENDIX III.

PROJECT SURVEY AREA: CONDITIONS AND GENERAL SITE LOCATIONS

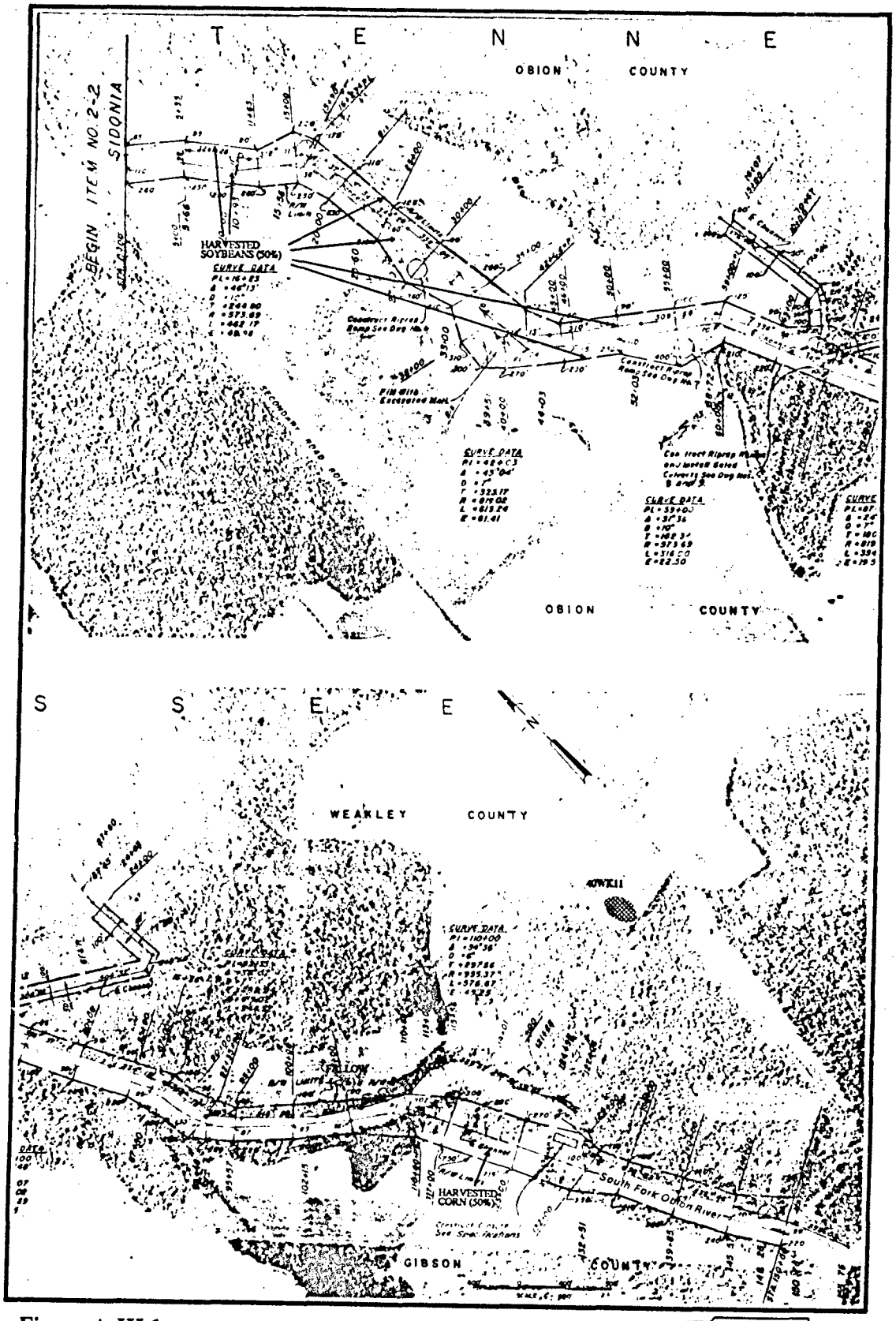

Figure A-III.1
Survey Conditions, Sidonia Tract, North End.

Obion River Survey Project

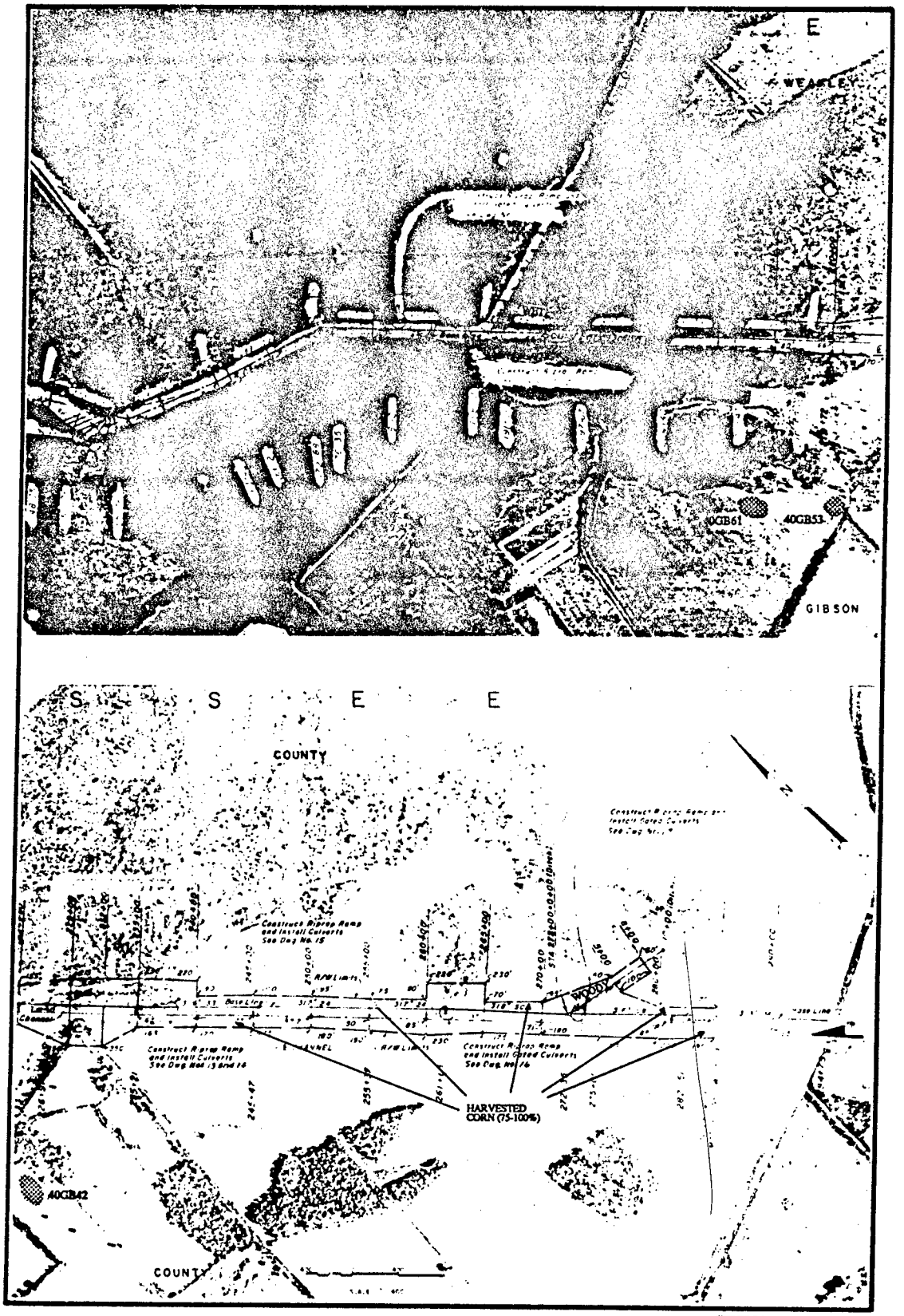

Figure A-III.2
Survey Conditions, Sidonia Tract,
Middle Portion.

Obion River Survey Project

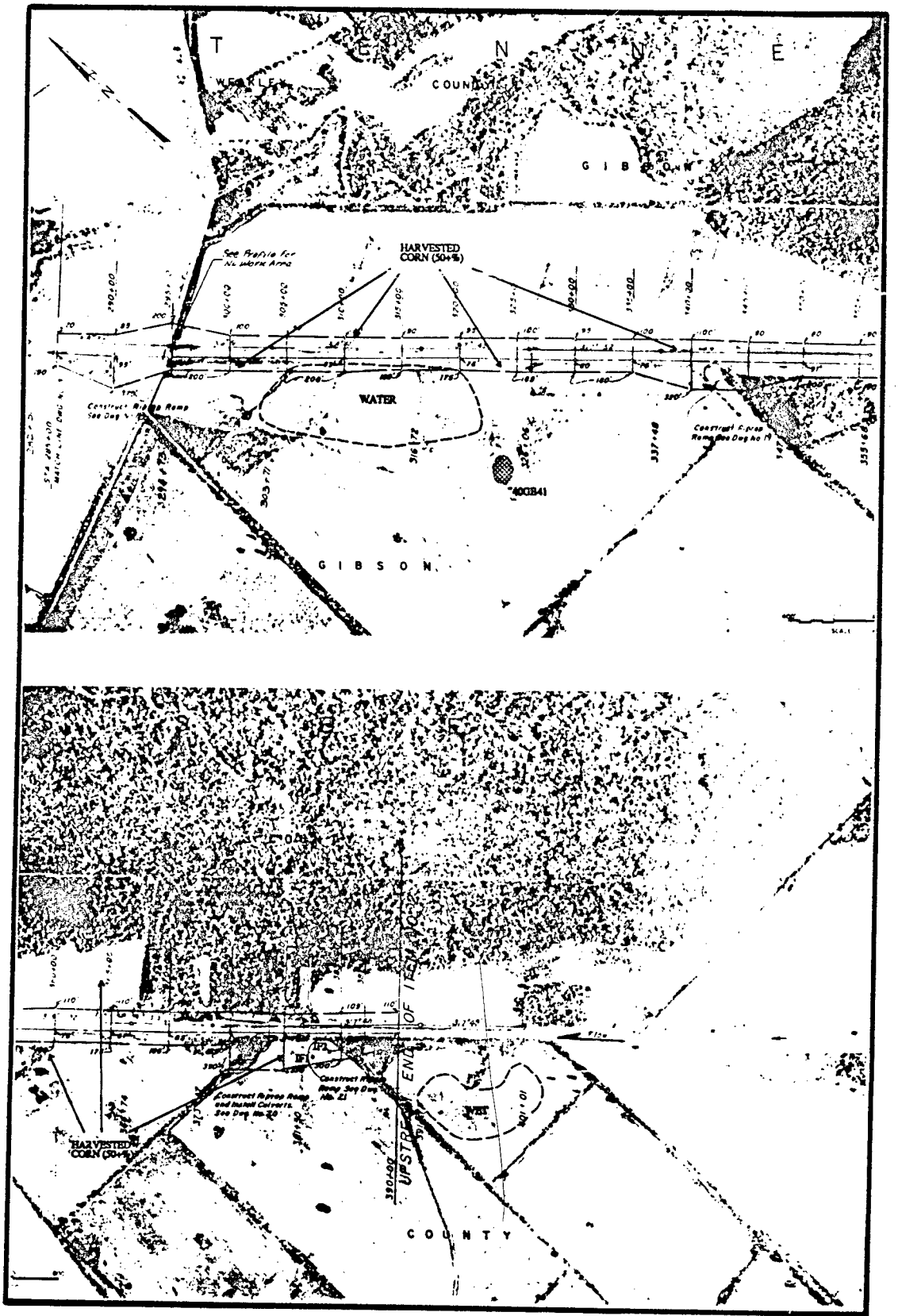

Figure A-III.3
Survey Conditions, Sidonia Tract, South End.

Obion River Survey Project

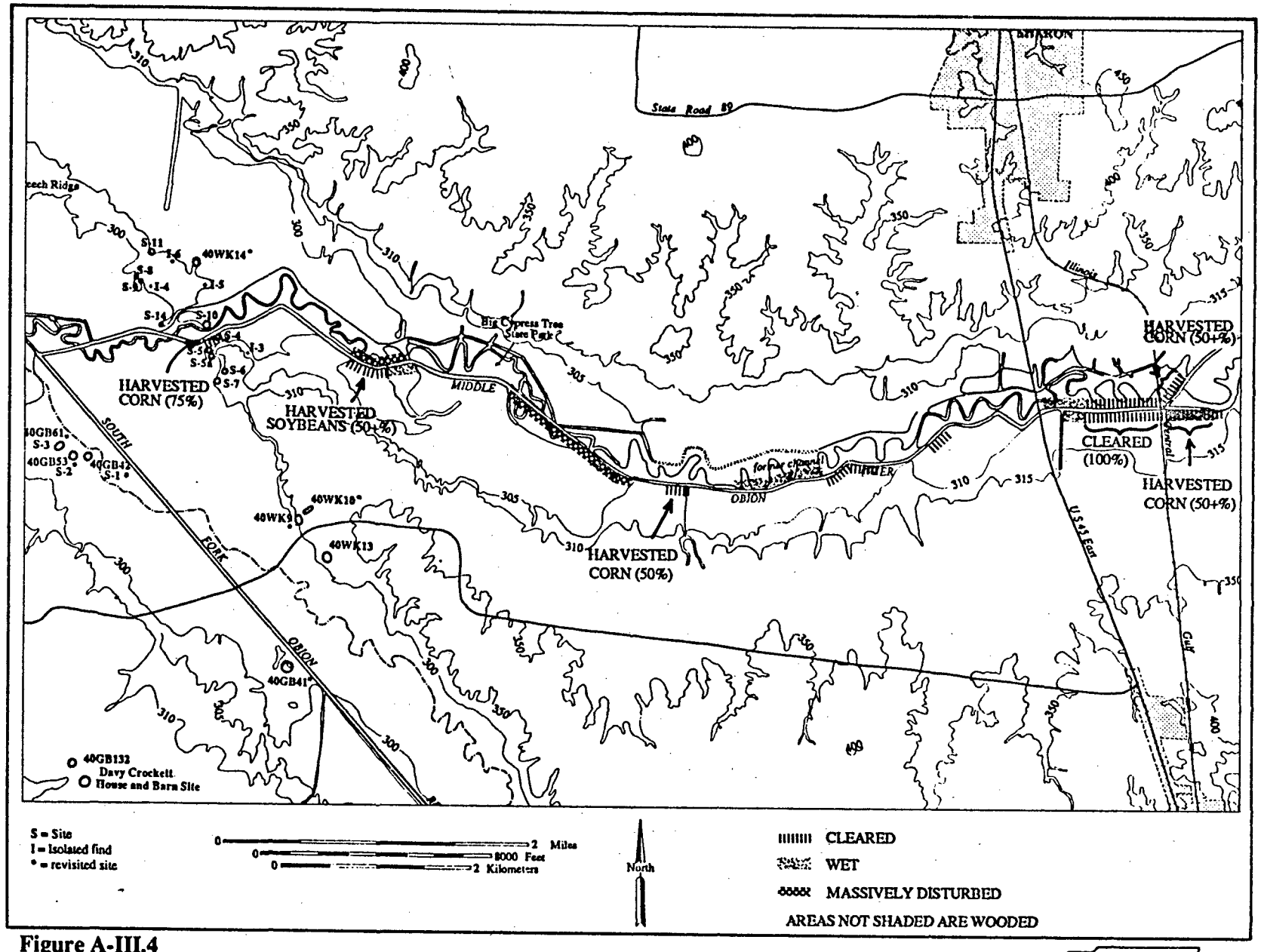

Figure A-III.4
Survey Conditions, Sharon Tract
(Middle Fork Obion River)
(wooded areas shovel tested except where noted)

Obion River Survey Project

APPENDIX IV.
PROJECT PERSONNEL

APPENDIX IV.

PROJECT PERSONNEL

Mr. David G. Anderson

Mr. David G. Anderson, project Principal Investigator and Field Director had responsibility for all aspects of the Obion River Survey Project investigations. Mr. Anderson has had over 15 years of experience in Southeastern Archaeology, and is the author of approximately 75 technical papers and monographs. His educational achievements include a BA in Anthropology from Case Western University (1972) and an MA in Anthropology from the University of Arkansas (1979). Mr. Anderson is currently a doctoral candidate in Anthropology at the University of Michigan; his dissertation research is focused on the evolution of Mississippian society in the Southeastern woodlands.

Dr. John Foss

Dr. John Foss served as geomorphologist and soil scientist on the Obion River Survey Project. Dr. Foss is a fulll professor and head of the Department of Plant and Soil Science at the University of Tennessee, Knoxville, Tennessee. The author of over 200 papers and monographs, Dr. Foss has worked on a number of projects integrating archaeology and soil science.

Mr. Patrick H. Garrow

Mr. Garrow, Executive Vice President and Chief Archaeologist of Garrow & Associates, served as Senior Technical Advisor on the Obion River project. In this capacity he reviewed the management summary and both the Draft of Final and Final Report before their submittal. Mr. Garrow has conducted archaeological research throughout the Southeast over the past 21 years. Mr. Garrow has earned both a BA (1966) and an MA (1968) in Anthropology from the University of Georgia. His career in cultural resource management spans 10 years, during which time he supervised over 350 projects.

Mr. Michael Griffin, Ms. Kathy Mulchrone, Mr. Joel Jones

Mr. Griffin served as Senior Field Technician on the Obion River project, assisting Anderson in the direction of the fieldwork on a day-to-day basis. Mr Griffin, who has a BA in Anthropology from Washington University, has amassed extensive field experience in the Southeast over the past 15 years. He has worked in Missouri,

Arkansas, Illinois, Mississippi, Tennessee, Alabama, Georgia, and South Carolina. Mr. Griffin was asisted by Mr. Joel Jones and Ms. Kathy Mulchrone, Field Technicians on the Obion River Survey Project.

Ms. Julie Barnes, Mr. Vince Macek

Ms. Julie Barnes prepared the project graphics. Ms. Barnes has an MA in Anthropology from the University of Nevada, Las Vegas, and has worked as both a graphics artist and field supervisor for Garrow & Associates, Inc. for approximately one year. Mr. Macek, who was responsible for graphics coordination on the Obion River Survey Project, received his formal training at Michigan State University (BA in Industrial Design 1976), and he has worked as an archaeological Graphics Specialist for the last four years. He has served as Graphics Specialist on over 100 survey reports.

Mr. Richard Bryant

Mr. Richaerd Bryant, project laboratory photographer, produced the report photographs and artifact shots. Mr. Bryant has a BA in Biology (Southwestern at Memphis 1974), and an MS in Ecology (University of Tennessee 1979), and his profesional experience covers a broad spectrum including biological illustration, sports photography, equine portrait work, and archaeological documentation. His archaeological experience includes HAER 4 X 5 documentation.

Mr. Keith McRae, Ms. Jenalee Muse

Mr. Keith McRae and Ms. Jenalee Muse are Laboratory Technicians in Garrow & Associates, Inc. archaeological laboratory in Atlanta, Georgia.